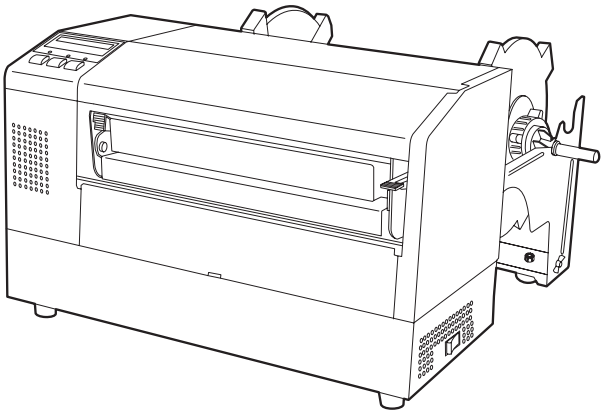
TEC Label/Tag Printer

B-852-TS12-QQ

Owner's Manual



TOSHIBA TEC CORPORATION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

(for USA only)

Changes or modifications not expressly approved by manufacturer for compliance could void the user's authority to operate the equipment.

"This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations."
"Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada."

(for CANADA only)

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-- Outline of the International ENERGY STAR® Office Equipment Program --

The International ENERGY STAR® Office Equipment Program is an international program that promotes energy saving through the penetration of energy efficient computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, monitors, printers, facsimiles, copiers, scanners, and multifunction devices. Their standards and logos are uniform among participating nations.

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Safety Summary

Personal safety in handling or maintaining the equipment is extremely important. Warnings and Cautions necessary for safe handling are included in this manual. All warnings and cautions contained in this manual should be read and understood before handling or maintaining the equipment.
Do not attempt to effect repairs or modifications to this equipment. If a fault occurs that cannot be rectified using the procedures described in this manual, turn off the power, unplug the machine, then contact your authorized TOSHIBA TEC representative for assistance.

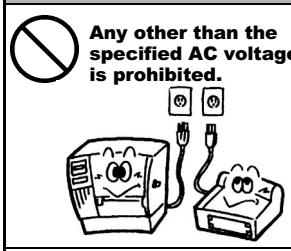
Meanings of Each Symbol

This symbol indicates warning items (including cautions).
Specific warning contents are drawn inside the △ symbol.
(The symbol on the left indicates a general caution.)

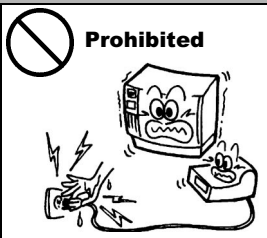
This symbol indicates prohibited actions (prohibited items).
Specific prohibited contents are drawn inside or near the ⃠ symbol.
(The symbol on the left indicates "no disassembling".)

This symbol indicates actions which must be performed.
Specific instructions are drawn inside or near the ● symbol.
(The symbol on the left indicates "disconnect the power cord plug from the outlet".)

WARNING This indicates that there is the risk of **death** or **serious injury** if the machines are improperly handled contrary to this indication.



Do not use voltages other than the voltage (AC) specified on the rating plate, as this may cause **fire** or **electric shock**.



Do not plug in or unplug the power cord plug with wet hands as this may cause **electric shock**.

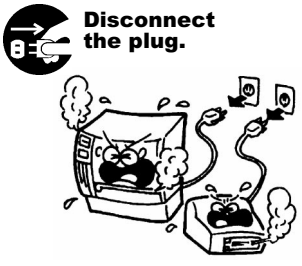
If the machines share the same outlet with any other electrical appliances which consume large amounts of power, the voltage will fluctuate widely each time these appliances operate. Be sure to provide an exclusive outlet for the machine as this may cause the machines to **malfunction**.

Do not place metal objects or water-filled containers such as flower vases, flower pots or mugs, etc. on top of the machines. If metal objects or spilled liquid enter the machines, this may cause **fire** or **electric shock**.

Do not insert or drop metal, flammable or other foreign objects into the machines through the ventilation slits, as this may cause **fire** or **electric shock**.

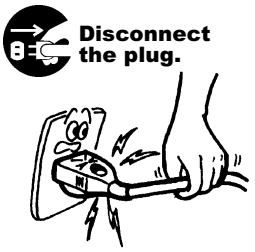
Do not scratch, damage or modify the power cords. Also, do not place heavy objects on, pull on, or excessively bend the cords, as this may cause **fire** or **electric shock**.

If the machines are dropped or their cabinets damaged, first turn off the power switches and disconnect the power cord plugs from the outlet, and then contact your authorized TOSHIBA TEC representative for assistance. Continued use of the machine in that condition may cause **fire** or **electric shock**.

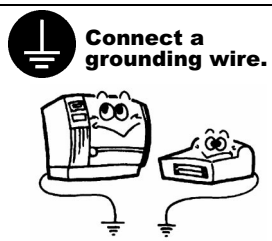


Continued use of the machines in an abnormal condition such as when the machines are producing smoke or strange smells may cause **fire** or **electric shock**. In these cases, immediately turn off the power switches and disconnect the power cord plugs from the outlet. Then, contact your authorized TOSHIBA TEC representative for assistance.

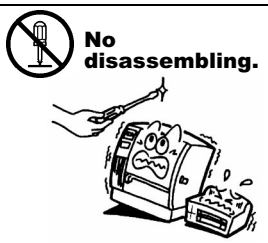
If foreign objects (metal fragments, water, liquids) enter the machines, first turn off the power switches and disconnect the power cord plugs from the outlet, and then contact your authorized TOSHIBA TEC representative for assistance. Continued use of the machine in that condition may cause **fire** or **electric shock**.



When unplugging the power cords, be sure to hold and pull on the plug portion. Pulling on the cord portion may cut or expose the internal wires and cause **fire** or **electric shock**.



Ensure that the equipment is properly grounded. Extension cables should also be grounded. **Fire** or **electric shock** could occur on improperly grounded equipment.



Do not remove covers, repair or modify the machine by yourself. You may be **injured** by high voltage, very hot parts or sharp edges inside the machine.

CAUTION This indicates that there is the risk of personal **Injury** or **damage** to objects if the machines are improperly handled contrary to this indication.

Precautions

The following precautions will help to ensure that this machine will continue to function correctly.

- Try to avoid locations that have the following adverse conditions:
  * Temperatures out of the specification * Direct sunlight * High humidity
  * Shared power source * Excessive vibration * Dust/Gas
- The cover should be cleaned by wiping with a dry cloth or a cloth slightly dampened with a mild detergent solution. NEVER USE THINNER OR ANY OTHER VOLATILE SOLVENT on the plastic covers.
- USE ONLY TOSHIBA TEC SPECIFIED paper and ribbons.
- DO NOT STORE the paper or ribbons where they might be exposed to direct sunlight, high temperatures, high humidity, dust, or gas.
- Ensure the printer is operated on a level surface.
- Any data stored in the memory of the printer could be lost during a printer fault.
- Try to avoid using this equipment on the same power supply as high voltage equipment or equipment likely to cause mains interference.
- Unplug the machine whenever you are working inside it or cleaning it.
- Keep your work environment static free.
- Do not place heavy objects on top of the machines, as these items may become unbalanced and fall causing **injury**.
- Do not block the ventilation slits of the machines, as this will cause heat to build up inside the machines and may cause **fire**.
- Do not lean against the machine. It may fall on you and could cause **injury**.
- Care must be taken not to injure yourself with the printer paper cutter.
- Unplug the machine when it is not used for a long period of time.

Request Regarding Maintenance

- Utilize our maintenance services.
  After purchasing the machine, contact iiour authorized TOSHIBA TEC representative for assistance once a year to have the inside of the machine cleaned. Otherwise, dust will build up inside the machines and may cause a **fire** or a **malfunction**. Cleaning is particularly effective before humid rainy seasons.
- Our preventive maintenance service performs the periodic checks and other work required to maintain the quality and performance of the machines, preventing accidents beforehand.
  For details, please consult your authorized TOSHIBA TEC representative for assistance.
- Using insecticides and other chemicals
  Do not expose the machines to insecticides or other volatile solvents. This will cause the cabinet or other parts to deteriorate or cause the paint to peel.

TABLE OF CONTENTS

Page

1. PRODUCT OVERVIEW 1-1

1.1 Introduction 1-1
1.2 Features 1-1
1.3 Unpacking 1-1
1.4 Accessories 1-2
1.5 Appearance 1-3
1.5.1 Dimensions 1-3
1.5.2 Front View 1-3
1.5.3 Rear View 1-3
1.5.4 Operation Panel 1-4
1.5.5 Interior 1-4

2. PRINTER SETUP 2-1

2.1 Precautions 2-1
2.2 Procedure before Operation 2-2
2.3 Assembling the Accessories 2-3
2.3.1 Assembling the Supply Holder Frame 2-3
2.4 Connecting the Cables to Your Printer 2-4
2.5 Connecting the Power Cord 2-5
2.6 Turning the Printer ON/OFF 2-6
2.6.1 Turning ON the Printer 2-6
2.6.2 Turning OFF the Printer 2-6
2.7 Loading the Media 2-7
2.7.1 Installing the Media onto the Supply Holder Unit 2-7
2.7.2 Installing the Supply Holder onto the Supply Holder Frame 2-9
2.7.3 Loading Media into the Printer 2-9
2.8 Setting Sensor Positions 2-12
2.8.1 Setting the Feed Gap Sensor 2-12
2.8.2 Setting the Black Mark Sensor 2-12
2.9 Loading the Ribbon 2-13
2.10 Inserting the Optional PCMCIA Cards 2-14
2.11 Test Print 2-15

3. PRINTER OPERATION 3-1

3.1 Overview 3-1
3.2 Operating Modes 3-1
3.3 Installing the Printer Drivers 3-3
3.3.1 System Requirements 3-3
3.3.2 Driver Download 3-3
3.3.3 Driver Installation 3-5
3.3.4 Add Printer 3-7
3.3.5 Uninstalling the TEC B-852 Printer Driver 3-8
3.4 Using the B-852 Printer Properties Menus 3-9
3.4.1 Summary of Properties 3-10
3.4.2 General Properties Tab 3-11
3.4.3 Details Tab 3-12
3.4.4 Regional Settings Tab 3-15
3.4.5 Page Setup Tab 3-17
3.4.6 Graphic Tab 3-20
3.4.7 Bar Font Tab 3-21
3.4.8 Stock Tab 3-24
3.4.9 Options Tab 3-28
3.4.10 Testing Tab 3-29
3.4.11 About Tab 3-32

4. ON LINE MODE 4-1
4.1 Operation Panel 4-1
4.2 Operation 4-2
4.3 Reset 4-2
4.4 Dump Mode 4-2
5. MAINTENANCE 5-1
5.1 Cleaning 5-1
5.1.1 Print Head/Platen/Sensors 5-1
5.1.2 Covers and Panels 5-2
5.1.3 Optional Cutter Module 5-2
5.2 Care/Handling of the Media and Ribbon 5-2
6. TROUBLESHOOTING 6-1
6.1 Error Messages 6-1
6.2 Possible Problems 6-2
6.3 Removing Jammed Media 6-3
6.4 Threshold Setting 6-4
APPENDIX 1 SPECIFICATIONS A1-1
A1.1 Printer A1-1
A1.2 Options A1-2
A1.3 Media A1-2
A1.3.1 Media Type A1-2
A1.3.2 Detection Area of the Transmissive Sensor A1-3
A1.3.3 Detection Area of the Reflective Sensor A1-4
A1.3.4 Effective Print Area A1-4
A1.4 Ribbon A1-5
APPENDIX 2 MESSAGE AND LED A2-1
APPENDIX 3 INTERFACE A3-1
APPENDIX 4 SYSTEM MODE A4-1
A4.1 Operation Panel A4-1
A4.2 Overview A4-2
A4.3 Self-Diagnostic Test A4-3
A4.4 Printer Parameter Fine Adjustment A4-5
A4.5 Test Print A4-13
A4.6 PCL Emulation Setting A4-19
A4.7 Additional Information A4-23
A4.7.1 Self-Diagnostic Test Result Sample and Descriptions A4-23
A4.7.2 Maintenance Counter/Parameter Check Print Sample and Descriptions A4-27
A4.7.3 Magnified Views of Slant Line Pattern A4-30
APPENDIX 5 PRINT SAMPLES A5-1
GLOSSARIES
INDEX

CAUTION!

1. *This manual may not be copied in whole or in part without prior written permission of TOSHIBA TEC.*
2. *The contents of this manual may be changed without notification.*
3. *Please refer to your local Authorized Service representative with regard to any queries you may have in this manual.*

1. PRODUCT OVERVIEW

1.1 Introduction

Thank you for choosing the TEC B-852 series label/tag printer. This Owner's Manual contains valuable information from general set-up to how to confirm the printer's operation using a test print, and should be read carefully to help gain maximum performance and life from your printer. This manual should be kept close at hand for everyday reference. Please contact your TOSHIBA TEC representative for further information concerning this manual.

1.2 Features

The B-852 printer has the following features:

- A 8.3 inch wide print head installed in such a compact body that the size of the printer body (except the Supply Holder Unit) is about 1/3 of the B-872 printer.
- The print head block can be fully opened to provide accessability.
- Various kinds of media can be used since the black mark sensors are located above and under the media passage, respectively, and the media sensors can be moved from the center to the left edge of the media.
- When the optional interface board is installed, Web functions such as remote maintenance and other advanced network functions are available.
- Superior hardware, including the specially developed 300 dots/inch (11.8 dots/mm) thermal print head which allows very clear print quality at a print speed of either 2 inches/sec. (50.8 mm/sec.) or 4 inches/sec. (101.6 mm/sec.).
- Besides the optional cutter module, there is also an optional PCMCIA Interface Board, Expansion I/O Interface Board, PCL5 Interface Board Kit, and the KB-80-QM Keyboard Unit.

1.3 Unpacking

Unpack the printer as per the Unpacking Instructions supplied with the printer.

NOTES:

- *Check for damage or scratches on the printer. However, please note that TOSHIBA TEC shall have no liability for any damage of any kind sustained during transportation of the product.*
- *Keep the cartons and pads for future transportation of the printer.*

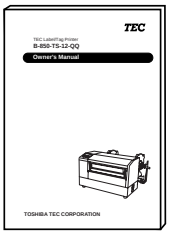
1.4 Accessories

When unpacking the printer, please make sure all accessories are supplied with the printer.

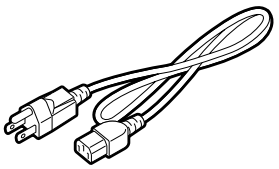
CAUTION!

Be sure to use TOSHIBA TEC approved print head cleaner. Failure to do this may shorten the print head life.

☑ Owner's Manual (1 copy)
(Doc./No. EO1-33029)

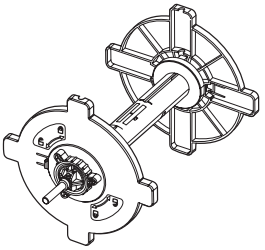


☐ Power Cord (1 pc.)
(P/No. FBCB0030202)

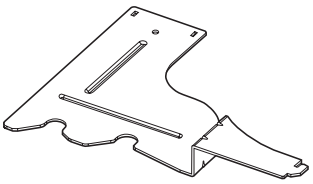


☐ Print Head Cleaner (1 pc.)
(P/No. 24089500013)

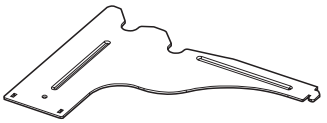
☐ Supply Holder Unit (1 pc.)
(P/No. FMBD0042701)



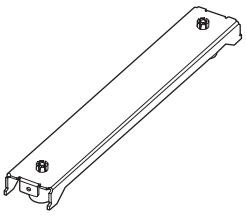
☐ Supply Holder Frame (L) (1 pc.)
(P/No. FMED0035201)



☐ Supply Holder Frame (R) (1 pc.)
(P/No. FMED0035301)



☐ Supply Holder Base (1 pc.)
(P/No. FMBB0063401)



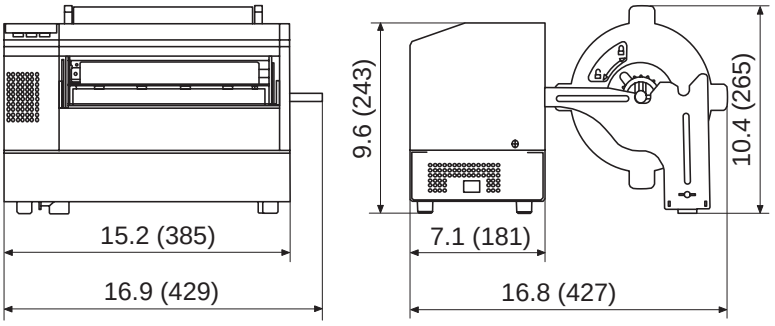
☐ Wing Bolt M-4x6 (2 pcs.)
(P/No. X20L406130)

1.5 Appearance

The names of the parts or units introduced in this section are used in the following chapters.

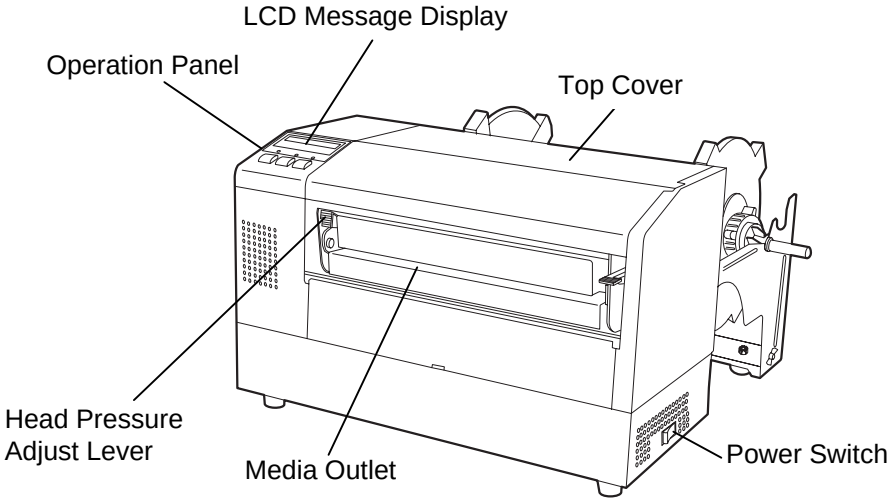
1.5.1 Dimensions

> ***NOTE:***
> *Depth is 18.5 inches (470 mm) when the optional Cutter Module is installed on the printer.*

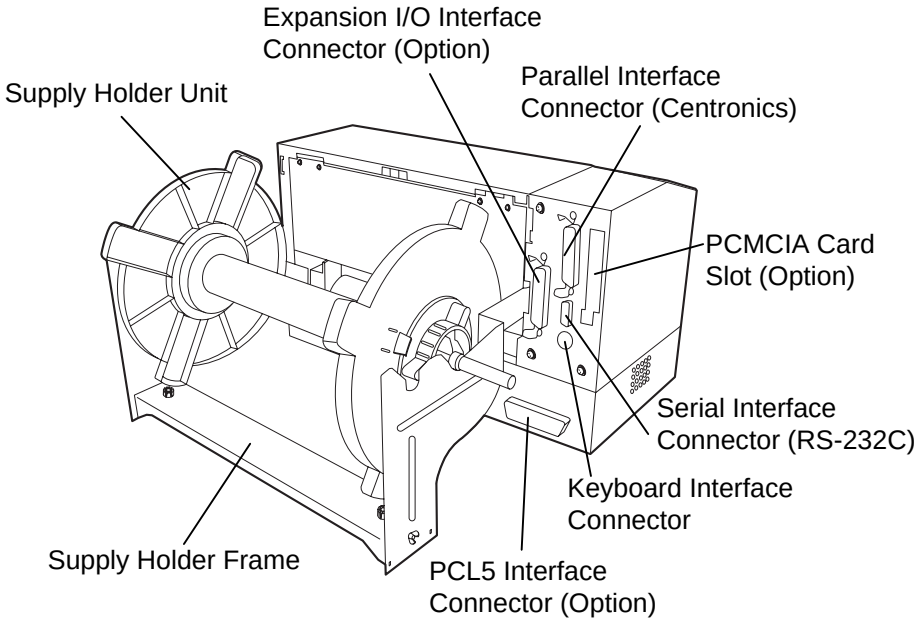


Dimensions in inches +(mm)

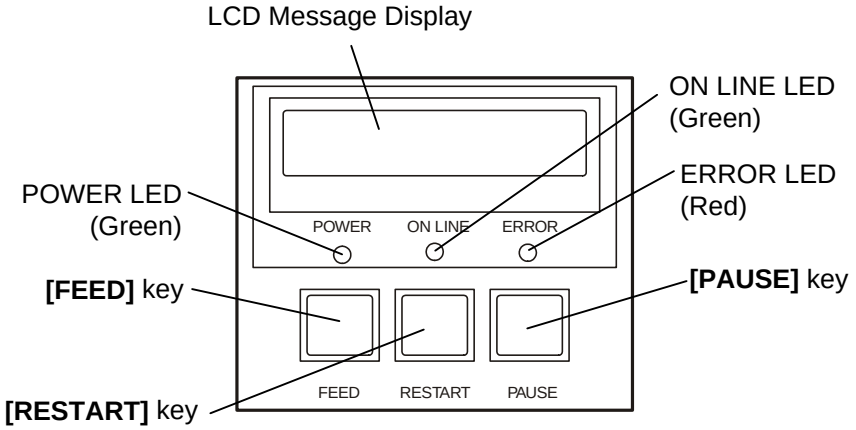
1.5.2 Front View



1.5.3 Rear View

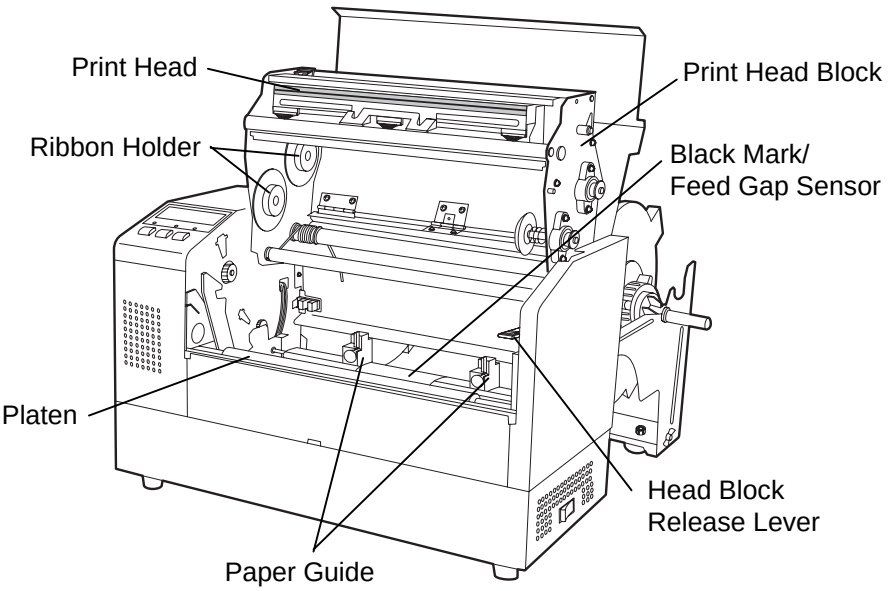


1.5.4 Operation Panel



Please see Section 4.1 for further information about the Operation Panel.

1.5.5 Interior



2. PRINTER SETUP

This section outlines the procedures to setup your B-852 printer prior to its operation. The section includes precautions, connecting cables, assembling accessories, loading media and ribbon, inserting the optional memory card, and performing a test print.

2.1 Precautions

- To insure the best operating environment, and to assure the safety of the operator and the equipment, please observe the following precautions.
- Operate the printer on a stable, level, operating surface in a location free from excessive humidity, high temperature, dust, vibration or direct sunlight.
- Keep your work environment static free. Static discharge can cause damage to delicate internal components.
- Make sure that the printer is connected to a clean source of AC Power and that no other high voltage devices that may cause line noise interference are connected to the same mains.
- Assure that the printer is connected to the AC mains with a three-prong power cable that has the proper ground (earth) connection.
- Do not operate the printer with the cover open. Be careful not to allow fingers or articles of clothing to get caught into any of the moving parts of the printer especially the optional cutter mechanism.
- Make sure to turn off the printer power and to remove the power cord from the printer whenever working on the inside of the printer such as changing the ribbon or loading the media, or when cleaning the printer.
- For best results, and longer printer life, use only TOSHIBA TEC recommended media and ribbons.
- Store the media and ribbons in accordance with their specifications.
- This printer mechanism contains high voltage components; therefore you should never remove any of the covers of the machine as you may receive an electrical shock. Additionally, the printer contains many delicate components that may be damaged if accessed by unauthorized personnel.
- Clean the outside of the printer with a clean dry cloth or a clean cloth slightly dampened with a mild detergent solution.
- Use caution when cleaning the thermal print head as it may become very hot while printing. Wait until it has had time to cool before cleaning. Use only the TOSHIBA TEC recommended print head cleaner to clean the print head.
- Do not turn off the printer power or remove the power plug while the printer is printing or while the ON LINE lamp is blinking.

2.2 Procedure before Operation

NOTE:

To communicate with the host computer, either an RS-232C cable or Centronics cable is required.
(1) RS-232C cable: 9 pins (do not use null modem cable)
(2) Centronics cable: 36 pins
(3) Expansion I/O cable: 24 pins (Option)

NOTE:

Use of a Windows Driver will allow issuing media on the B-852 printer in place of a general laser printer from a Windows application. Installing the optional PCL5 interface board in the B-852 printer allows use of the drivers which support the PCL5.
The printer can also be controlled with its own programming commands. Please contact your TOSHIBA TEC reseller for the Interface/Communication Manual.

This section describes the outline of the printer setup.

1. Unpack the accessories and printer from the box.
2. Refer to Safety Precautions in this manual and set up the printer at a proper location.
3. Assemble the Supply Holder Frame and attach it to the rear of the printer. (Refer to Section 2.3.)
4. The host computer must have an available serial port or Centronics parallel port. (Refer to Section 2.4.)
5. Be sure to insert the power cord plug into an AC outlet. (Refer to Section 2.5.)
6. Load the media roll onto the Supply Holder Unit and set it on the Supply Holder Frame. (Refer to Section 2.7.)
7. Adjust the position of the Feed Gap Sensor or Black Mark Sensor depending on the media being used. (Refer to Section 2.8.)
8. Load the ribbon into the Print Head Block. (Refer to Section 2.9.)
9. Turn the Power ON. (Refer to Section 2.6.)
10. Perform a test print. (Refer to Section 2.11.)
11. Install the Printer Drivers. (Refer to Section 3.)

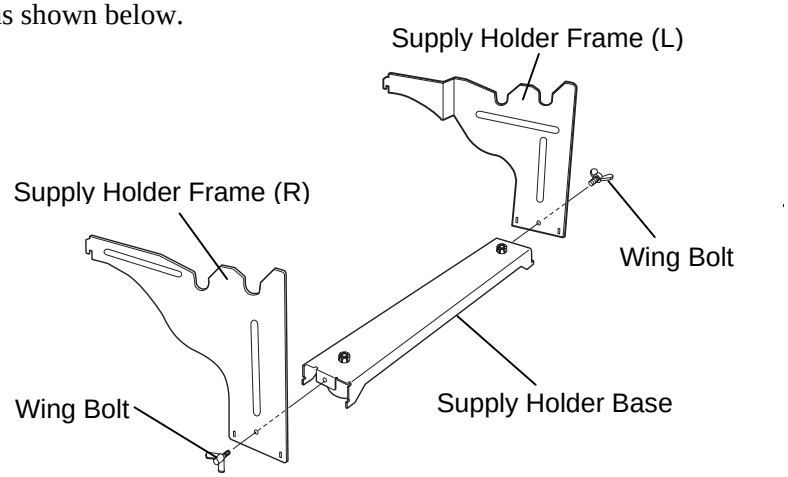
2.3 Assembling the Accessories

The following procedure outlines the steps required to assemble the Supply Holder Frame and attach the frame to the B-852 printer in preparation for loading the media.

2.3.1 Assembling the Supply Holder Frame

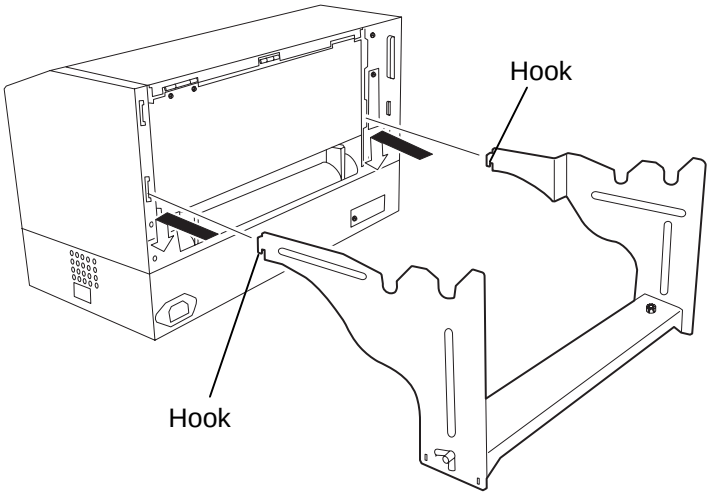
> ***NOTE:***
> *Make sure that the two small flanges at each end of the Supply Holder Base fit into the small rectangular holes at the bottom of the Supply Holder Frames before tightening the Wing Bolts.*

1. Assemble the Supply Holder Frame (L) and Supply Holder Frame (R) to the Supply Holder Base using the two M-4X6 Wing Bolts supplied, as shown below.



2. Attach the assembled Supply Holder Frame to the rear of the B-852 printer by inserting the hooks of the Frame into the two slots in the rear of the printer as shown in the figure below.

> ***NOTE:***
> *After attaching the supply holder frame to the printer, make sure that it is assembled firmly.*

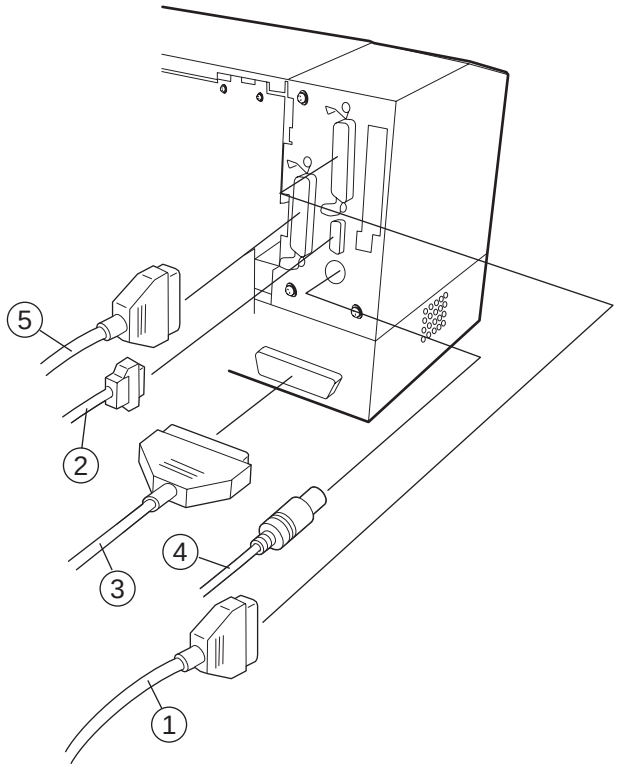


2.4 Connecting the Cables to Your Printer

The following paragraphs outlines how to connect the cables from the B-852 printer to your host computer, and will also show how to make cable connections to other devices such as the KB-80-QM keyboard, etc. Depending on the application software you use to print labels, there are three possibilities for connecting the printer to your host computer. These are:

- A serial cable connection between the printer's RS-232 serial connector and one of your host computer's COM ports. (Refer to APPENDIX 3.)
- A parallel cable connection between the printer's standard parallel connector and your host computer's parallel port (LPT).
- A parallel cable connection between the printer's optional PCL5 interface connector and your host computer's parallel port (LPT).

The diagram below shows all the possible cable connections to the current version of the B-852 printer.



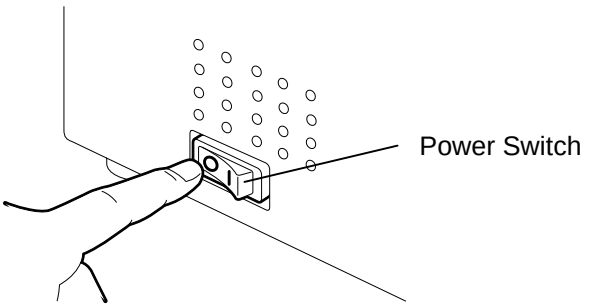
① Parallel Interface Cable (Centronics)
② Serial Interface Cable (RS-232C)
③ PCL5 Interface Cable (Option)
④ KB-80-QM Keyboard Interface Cable (Option)
⑤ Expansion I/O Interface Cable (Option)

2.5 Connecting the Power Cord

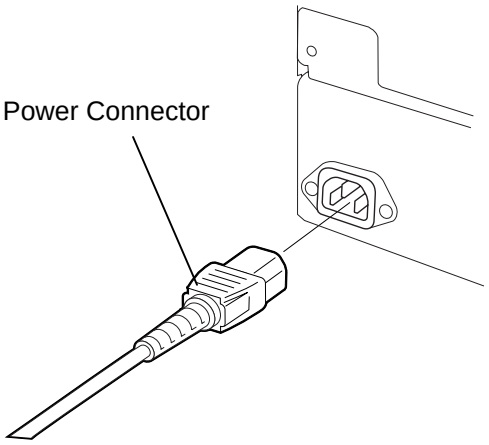
CAUTION!

1. *Make sure that the printer power switch is turned to the off position ○ before connecting the power cord to prevent possible electric shock or damage to the printer.*
2. *Use only the power cord supplied with the printer. Use of any other cord may cause electric shock or fire.*
3. *Connect the power cord to a three-prong outlet only, with the third prong being a good ground (earth) connection.*

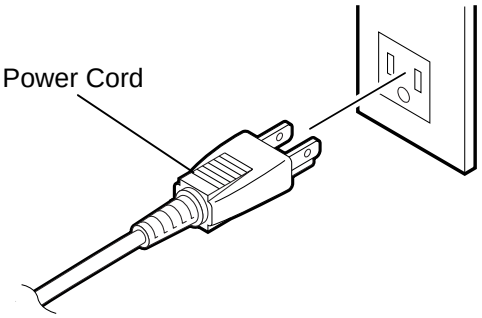
1. Make sure that the printer power switch is in the off position.



2. Connect the Power Cord to the printer as shown in the figure below.



3. Plug the other end of the Power Cord into a grounded outlet as shown in the figure below.



2.6 Turning the Printer ON/OFF

When the printer is connected to your host computer it is good practice to turn the printer ON before turning on your host computer and turn OFF your host computer before turning off the printer.

2.6.1 Turning ON the Printer

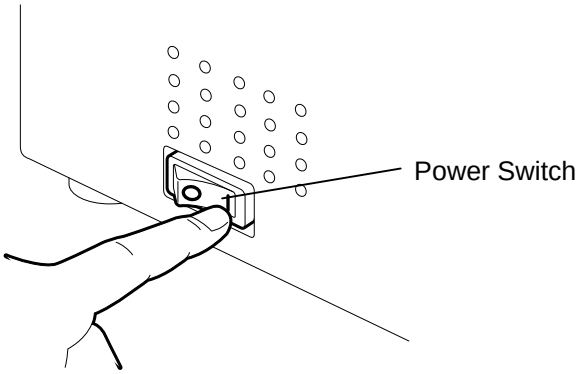
CAUTION!

Use the power switch to turn the printer On/Off. Plugging or unplugging the power cord to turn the printer On/Off may cause fire, an electric shock, or damage to the printer.

NOTE:

If an error message appears in the display instead of the ON LINE message or the ERROR LED lamp is illuminated, go to Chapter 6.1, Error Messages.

1. To turn ON the printer power, press the power switch as shown in the diagram below. Note that (|) is the power ON side of the switch.



2. Check that the ON LINE message appears in the LCD Message Display and that the ON LINE and POWER LED lights are illuminated.

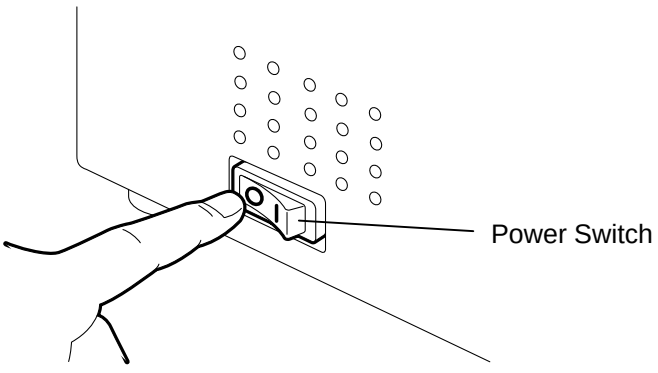
2.6.2 Turning OFF the Printer

CAUTION!

- *Do not turn off the printer power while the media is being printed as this may cause a paper jam or damage to the printer.*
- *Do not turn off the printer power while the ON LINE light is blinking as this may cause damage to your host computer.*

1. Before turning off the printer power switch verify that the ON LINE message appears in the LCD Message Display and that the ON LINE LED light is on and is not flashing.

2. To turn OFF the printer power press the power switch as shown in the diagram below. Note that (O) is the power OFF side of the switch.

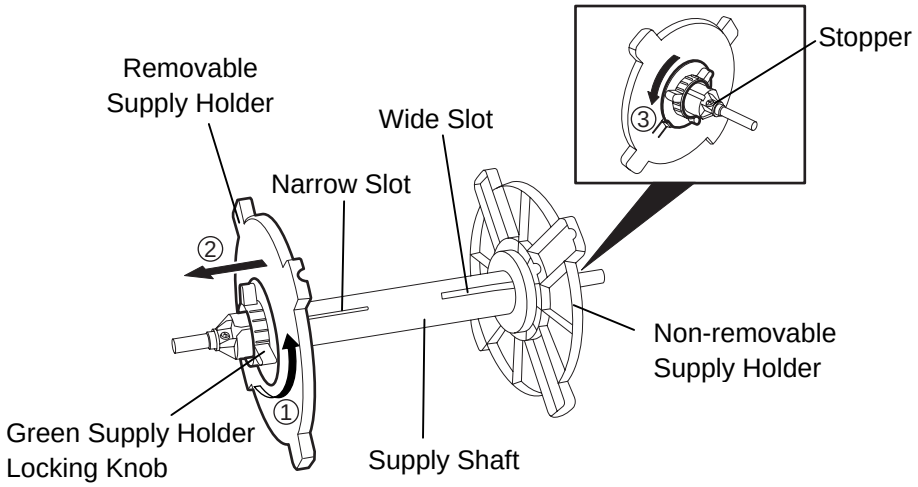


2.7 Loading the Media

The following procedure will outline the steps required to install the media onto the Supply Holder Unit and adjust its position in the Supply Holder Frame at the rear of the B-852 printer. The procedure will then show the steps to properly load the media into the printer so that it feeds straight and true through the printer.

2.7.1 Installing the Media onto the Supply Holder Unit

The figure below shows the assembled Supply Holder Unit and the paragraphs that follow show the step-by-step procedures to disassemble the Supply Holder Unit, install the media onto the Supply Shaft, then reassembling the Supply Holder Unit so that the auto centering mechanism will automatically center the media on the Supply Shaft.



NOTES:

1. *The Non-removable Supply Holder is the one that slides in the wide slot while the Removable Supply Holder is the one that slides in the narrow slot.*
2. *Do not turn the supply holder locking knob counter-clockwise too far, or it may come off the supply holder Unit.*

Disassembling the Supply Holder Unit

1. Position the Supply Holder Unit as shown in the above diagram so that the Non-removable Supply Holder is at the right.

2. Rotate the green Supply Holder Locking Knob in the direction of arrow ① (counterclockwise) to loosen the Removable Supply Holder.

3. Slide the Removable Supply Holder in the direction of arrow ② to remove it from the Supply Shaft.

4. Rotate the green Supply Holder Locking Knob in the direction of arrow ③ (counterclockwise) to loosen the Non-removable Supply Holder.

5. Slide the Non-removable Supply Holder all the way to the end of the Supply Shaft until it stops.

2.7.1 Installing the Media onto the Supply Holder Unit (cont.)

WARNING!

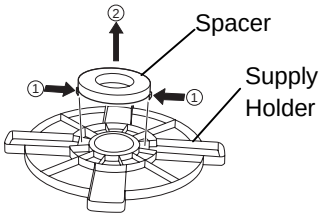
If you turn the Removable Supply Holder side down after loading the media, the media may drop by weight. You might be injured by the dropped media.

CAUTION!

When installing the media roll, do not push on the Non-removable Supply Holder as this will result in the media roll not being properly centred.

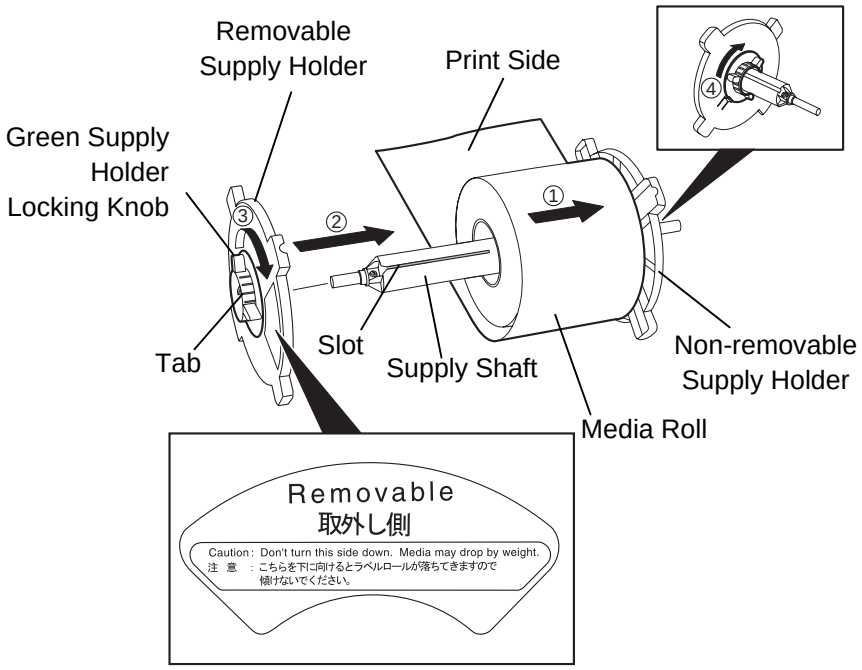
NOTES:

1. *This supply holder accepts four sizes of media core: 38 mm, 40 mm, 42 mm and 76.2 mm.. When using a media roll of 38 mm, 40 mm, or 42 mm, remove the spacers from the supply holders by pushing both hooks of the spacer. Keep the removed spacers safe.*



2. *Use only inside wound label stock. Outside wound label stock may not feed properly. Use outside wound label stock at your own risk.*
3. *Do not over-tighten the green supply holder locking knob.*

The diagram below, and the steps that follow, show the procedures for installing the Media onto the Supply Shaft and reassembling the Supply Holder Unit. Be sure to follow the step-by-step procedure exactly or the auto centering mechanism may not work properly.



Installing the Media and reassembling the Supply Holder Unit

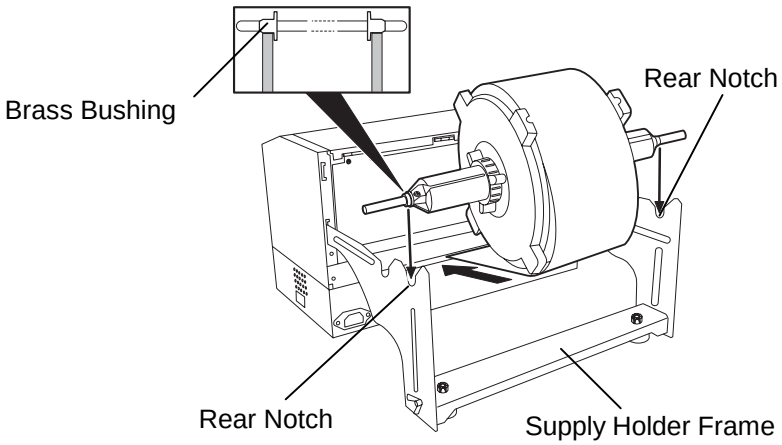
1. Place the media roll onto the Supply Shaft with the media feeding from the bottom as shown in the diagram above. ①
2. Align the tab of the Removable Supply Holder with the Slot in the Supply Shaft, then reinstall the Removable Supply Holder by sliding it onto the Supply Shaft as shown in the figure above.
3. Holding the reassembled Supply Holder Unit in your right hand, apply pressure only to the reinstalled Removable Supply Holder to push it in the direction of arrow ②, causing the auto centering mechanism to center the media on the Supply Shaft.
4. Tighten the green Supply Holder Locking Knob for the Removable Supply Holder by turning it in the direction of arrow ③.
5. Tighten the green Supply Holder Locking Knob for the Non-removable Supply Holder by turning it in the direction of arrow ④ .

2.7.2 Installing the Supply Holder Unit onto the Supply Holder Frame

> ***NOTE:***
> *Make sure that the brass bushings of the Supply Shaft are seated into the notches so that the entire Supply Holder Unit rotates smoothly.*

> ***CAUTION!***
> *The reassembled Supply Holder Unit and media roll may be quite heavy, so be careful not to pinch your fingers when installing the Supply Holder Unit onto the Supply Holder Frame.*

1. Insert the assembled Supply Holder Unit into the rear notches of the Supply Holder Frame as shown in the diagram below.



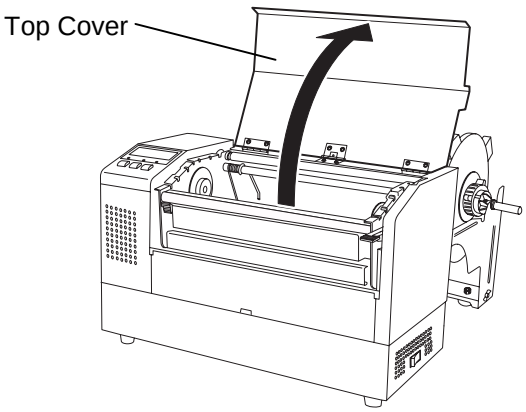
2. Now feed the media from the bottom of the media roll into the media slot at the rear of the printer as shown.

2.7.3 Loading Media into the Printer

The following paragraphs outlines how to properly install the media into the printer from the Supply Holder Unit that has been installed in the previous steps.

> ***WARNING!***
> *The Top Cover can be opened during the operation for control purposes only. It should be closed during normal operation.*

1. Raise the Top Cover as shown in the diagram below.



2.7.3 Loading Media into the Printer (Cont.)

WARNING!

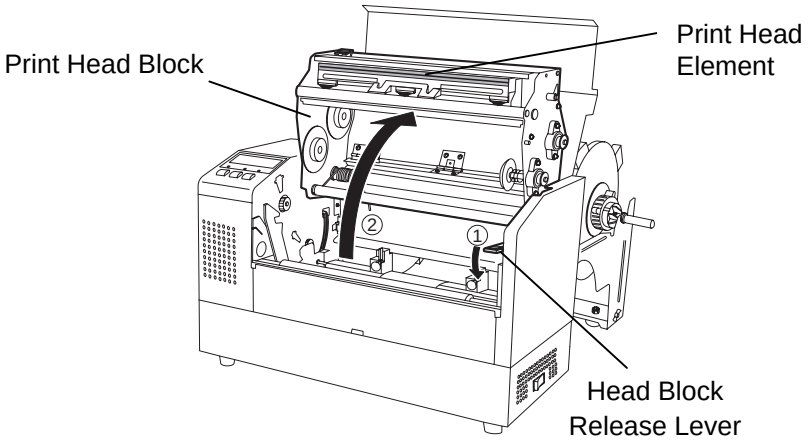
- *The Print Head may become hot. Do not touch the Print Head.*
- *Risk of injuries. Do not touch moving parts. Disconnect the mains before maintenance of ribbon and media.*

CAUTION!

Be careful not touch the Print Head Element when raising the Print Head Block. Failure to do this may cause missing dots by static electricity or other print quality problems.

2. Release the Print Head Block by pressing down on the Head Block Release Lever ① as shown below.

3. Raise the Print Head Block to its fully open position as shown by the arrow ② in the diagram below.



4. Release the Paper Guide Locking Levers on the two Paper Guides as shown in the figure below.

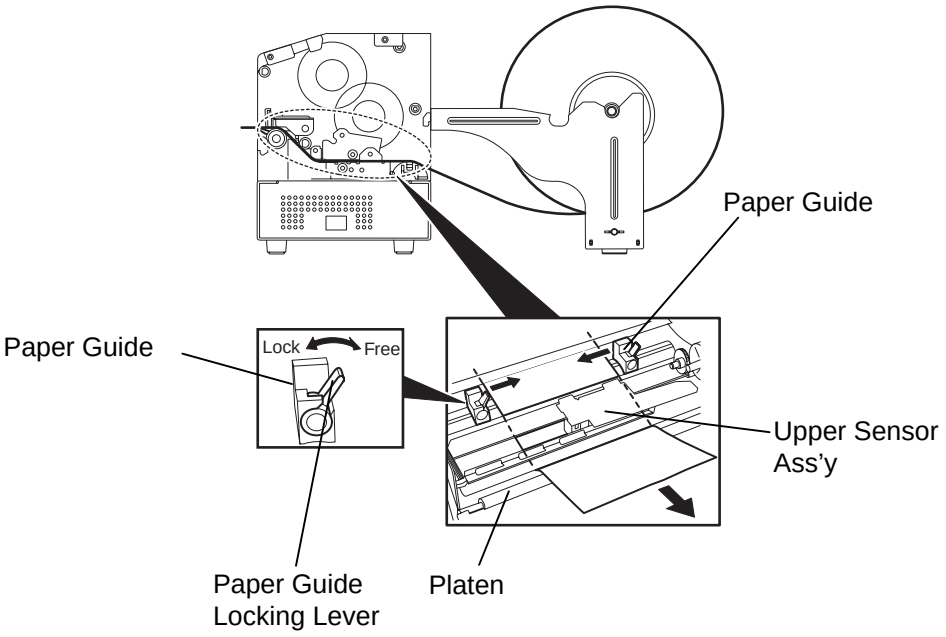
5. Grasp the right hand Paper Guide and move it to the right to open the Paper Guides wide enough to accept the media.

6. Feed the media between the two guides.

7. Feed the paper under the Upper Sensor Ass'y and pull the paper until it extends past the Platen. (until it extends past the cutter outlet when the optional Cutter Module is attached.)

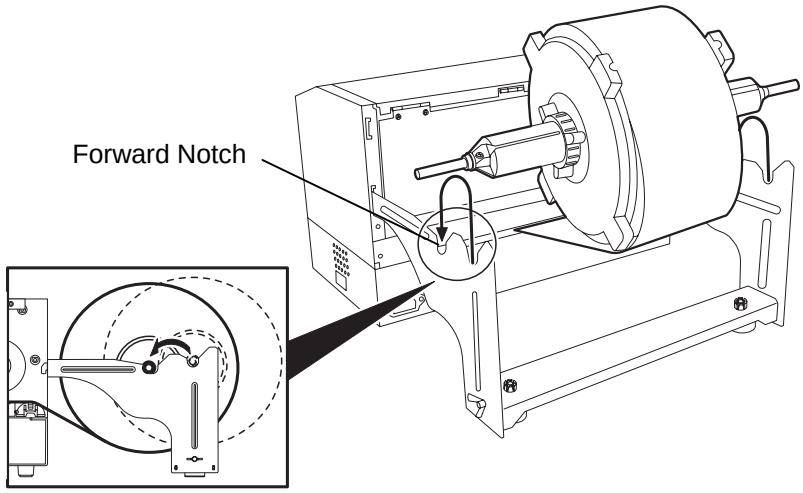
8. Grasp the right Paper Guide and move it to the left to close both Paper Guides and automatically center the media.

9. Press the Paper Guide Locking Levers to lock the Paper Guides in place.

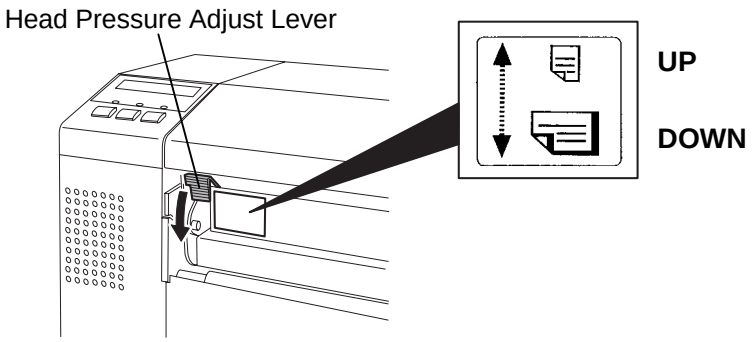


2.7.3 Loading Media into the Printer (Cont.)

10. After loading the media, don't forget to move the Supply Holder Unit to the forward notches of the Supply Roll Frame as shown below.



11. If you are using labels or thick tag paper, then it may be necessary to increase the head pressure by lowering the Head Pressure Adjust Lever in the figure below.



NOTE: Head Pressure Adjust Lever Position

Lever position	Head pressure	Available media
UP	Low	•Thin tag paper •Narrow media
DOWN	High	•Label •Thick tag paper •Wide media •Full width media

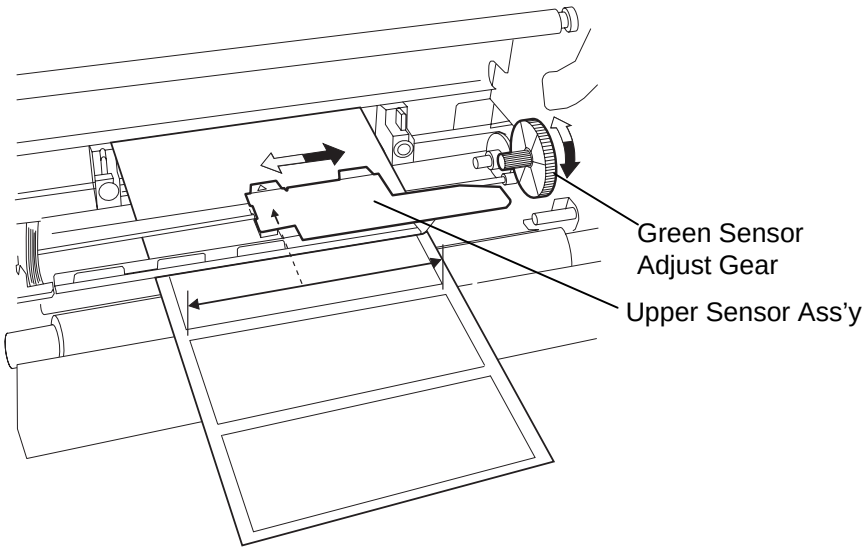
- *When using full width media, be sure to turn the Head Pressure Adjust Lever to DOWN, regardless of the thickness.*
- *For all kinds of media except the full width media, turn the Head Pressure Adjust Lever to UP, if the print quality is to be ensured.*
- *If the print tone is light when using thin tag paper, turn the Head Pressure Adjust Lever to DOWN.*

2.8 Setting Sensor Positions

After loading the media, as outlined in the previous paragraphs, it will then be necessary to set the Media Sensors used to detect the print start position for label or tag printing.

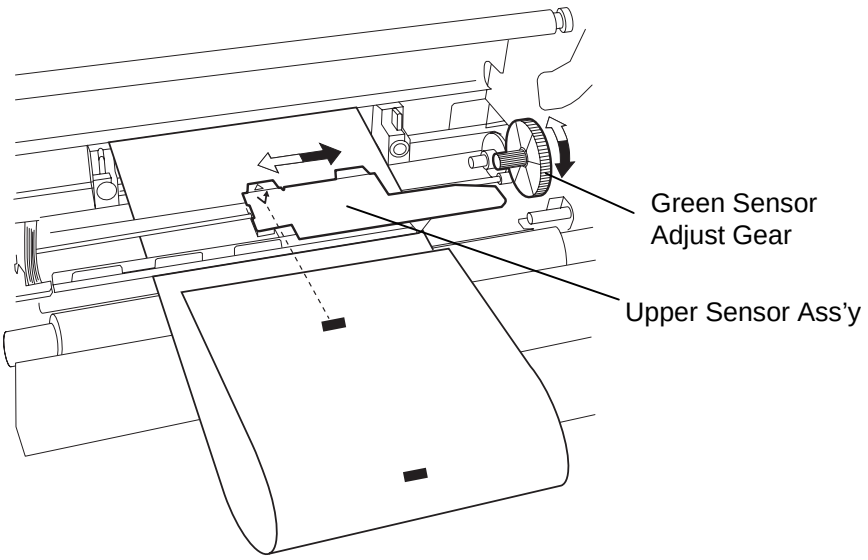
2.8.1 Setting the Feed Gap Sensor

1. With the Print Head Block raised as described in section 2.7.3, pass the labels under the Upper Sensor Ass'y as shown in the figure below.
2. Rotate the Green Sensor Adjust Gear to move the Sensor Ass'y to the left or right to center the arrow (↑) over the label.
3. With the sensor set to the center of the labels, it will best detect the gap between labels even if the labels are round.



2.8.2 Setting the Black Mark Sensor

1. If the Black Mark is printed on the top of the tag media then simply rotate the Green Sensor Adjust Gear to move the Sensor Ass'y so that the Black Mark Indicator (▽) is directly in line with the Black Mark on the top of the paper.
2. If the Black Mark is printed on the bottom of the tag media then fold the media back to be able to see the Black Mark and its relationship to the Sensor Ass'y as shown in the figure below.



2.9 Loading the Ribbon

WARNING!

- *The Print Head may become hot. Do not touch the Print Head.*
- *The Top Cover can be opened during the operation for control purposes only. It should be closed during normal operation.*
- *Risk of injuries. Do not touch moving parts. Disconnect the mains before maintenance of ribbon and media.*

1. Raise the Top Cover and release and raise the Print Head Block as described in section 2.7.3, steps **1** and **2**.

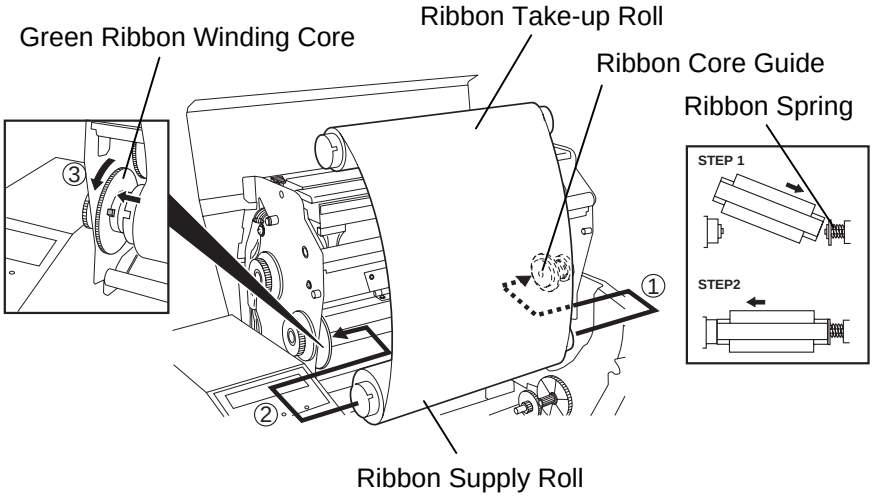
2. Hold the Ribbon Supply Roll in your left hand and the Ribbon Take up Roll in your right hand.

3. Install the Ribbon Supply Roll into the Print Head Block as shown in the figure below and described in the following paragraphs.

4. Step **1**, engage the end of the Ribbon Supply Roll Core to the Ribbon Core Guide ① and push to compress the Ribbon Spring.

5. Step **2**, engage the opposite end of the Ribbon Supply Roll Core to the Green Ribbon Winding Core ② releasing pressure to relax the Ribbon Spring.

6. Rotate the Green Ribbon Winding Core to lock the Ribbon Supply Roll into position. ③



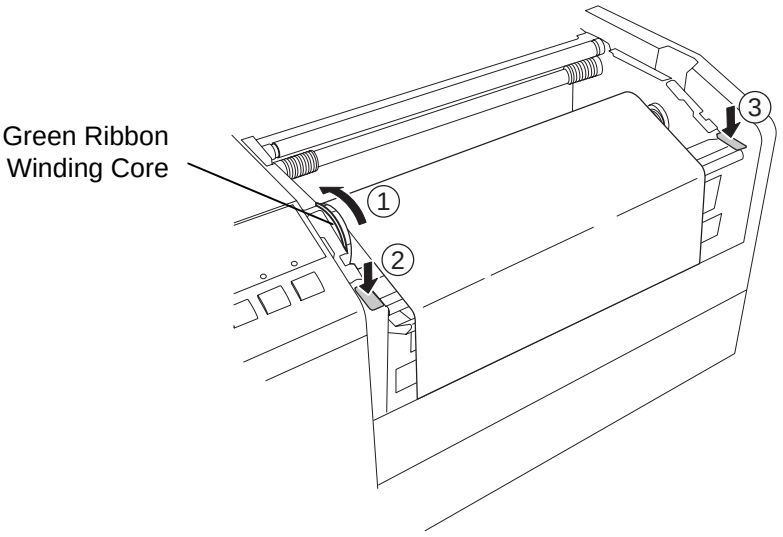
NOTE:

Be sure to remove any slack in the ribbon. Printing with a wrinkled ribbon will lower the print quality

7. Repeat steps **4** through **6** with the Ribbon Take-up Roll, locking it in place also.

8. Take up any slack in the ribbon by rotating the Green Ribbon Winding Core on the Ribbon Take-up Roll in the direction of arrow ①.

9. Close the Print Head Block and lock it in place by pressing at locations ② and ③ in the figure below.



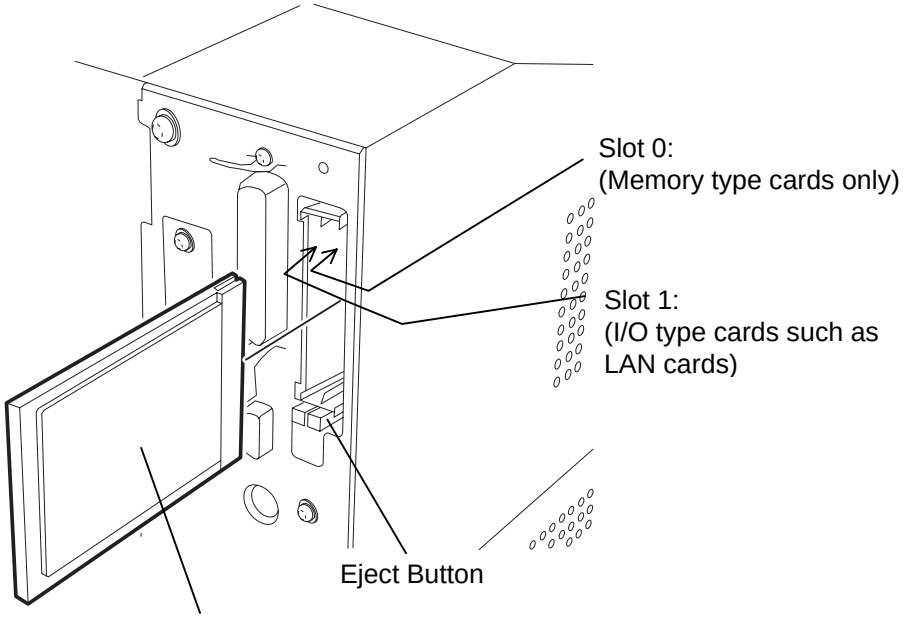
2.10 Inserting the Optional PCMCIA Cards

CAUTION!

1. *To protect PC cards, discharge static electricity from your body by touching the metal cabinet of the printer before touching the card.*
2. *Before inserting or removing a PCMCIA card make sure that the printer's power is turned off.*
3. *Be sure to protect PCMCIA Cards when not in use by putting them into their protective covers.*
4. *Do not subject the card to any shocks or excessive force nor expose the card to extremes in temperature or humidity*
5. *The card may be inserted into the slot halfway even in the wrong orientation. However, the slot is safety designed so that the card will not seat against the connector pins.*

When the optional PCMCIA interface board is installed into the B-852 printer, there will be two PCMCIA slots available as shown in the figure below. This allows for the use of Flash Memory Type Cards or I/O type Cards such as LAN Cards. The following paragraphs outline how to insert PCMCIA cards.

1. Make sure that the printer's power switch is in the OFF position.
2. Hold the PCMCIA Card so that the model name printed side faces right. Insert the card into the proper slot until the Eject Button pops out.



3. The following PCMCIA cards can be used.

Type	Maker	Description	Remarks
ATA Card	San Disk Hitachi	A card conforming to the PC card ATA standard	----------
LAN Card	3 COM	Ether Link III 3C589D PC card	Install into the slot (1) only. (This card installed into the slot (0) will not work.)
		Megahertz® 10M bps LAN PC Card 3CCE589ET Series	
Flash Memory Card (4 MB)	Maxell	EF-4M-TB CC	----------
		EF-4M-TB DC	

2.11 Test Print

The following test procedure allows you to perform a print test to verify that the printer is operating correctly. During the running of this test, the printer will first issue a blank page of media to allow the sensors to detect the Black Mark or Label Gap. Then it will print five pages of slanted lines followed by five pages of sample bar codes then finishing by printing five pages that contain characters of various sizes.

Issue count = 5 of each kind of label
Print method = Thermal Transfer (ribbon required)
Print speed = 4" per second
Sensor = Transmissive (Feed Gap Sensor) or Reflective (Black Mark sensor).
Type of print = Batch (No cut)
Print Length = 76 mm

The following paragraphs guide you through the diagnostic procedure for test label printing. Please follow the step-by-step procedures exactly for best results.

1. Load the media. For best results, use media that is 76 mm or longer in length.
2. Press and hold the **[FEED]** and **[PAUSE]** keys while turning on the printer power switch. The LCD Message Display will show the following message.

   ```
   <1>DIAG.    1.0A
   ```

3. Press the **[FEED]** key three times to advance to the test print mode as indicated by the following message in the LCD Message Display.

   ```
   <4>TEST PRINT
   ```

4. Press the **[PAUSE]** key and the LCD Message Display will display the following message.

   ```
   PRINT CONDITION
   ```

5. Press the **[RESTART]** key and the LCD Message Display will change to show the following message.

   ```
   AUTO PRINT (REFL)
   ```

6. When the media loaded is:
   Tag paper utilizing the Black Mark Sensor (Reflective Sensor)
   → Continue on to the next step 7.
   Labels utilizing the Feed Gap Sensor (Transmissive Sensor)
   → Press the **[RESTART]** key again, and proceed to step **10.**

7. Press the **[PAUSE]** key and the printer will issue one blank label and will then print five labels of slant lines and the LCD Message Display will continue to display the following message.

   ```
   AUTO PRINT (REFL)
   ```

2.11 Test Print (cont.)

> ***NOTE:***
> *If an error occurs during the print test the printer will display an error message and stop printing. Refer to Chapter 6.1 for a definition of error messages.*
> *The error may be cleared by pressing the **[PAUSE]** key but the test print will not be resumed and the LCD message display will return to showing:*
>
> <1> DIAG. V1.0A

> ***NOTE:***
> *When the **[PAUSE]** key is pressed in Step 10, the printer will enter each print pattern detailed on the setting menu mode. To exit, press the **[FEED]** and **[RESTART]** keys at the same time.*

8. Press the **[PAUSE]** key again and the printer will now print five labels of sample bar codes lines and the LCD Message Display will continue to display the following message.

AUTO PRINT (REFL)

9. Press the **[PAUSE]** key again and the printer will now print five labels of characters of various sizes and the LCD Message Display will return to showing the test print start message as shown below.

<4>TEST PRINT

10. Upon pressing the **[RESTART]** key for the second time in step **6**, the LCD Message Display will change to that shown below.

AUTO PRINT (TRAN)

11. Press the **[PAUSE]** key and the printer will issue one blank label and will then print five labels of slant lines and the LCD Message Display will continue to display the following message.

AUTO PRINT (TRAN)

12. Press the **[PAUSE]** key again and the printer will now print five labels of sample bar codes lines and the LCD Message Display will continue to display the following message.

AUTO PRINT (TRAN)

13. Press the **[PAUSE]** key again and the printer will now print five labels of characters of various sizes and the LCD Message Display will return to showing the test print start message as shown below.

<4>TEST PRINT

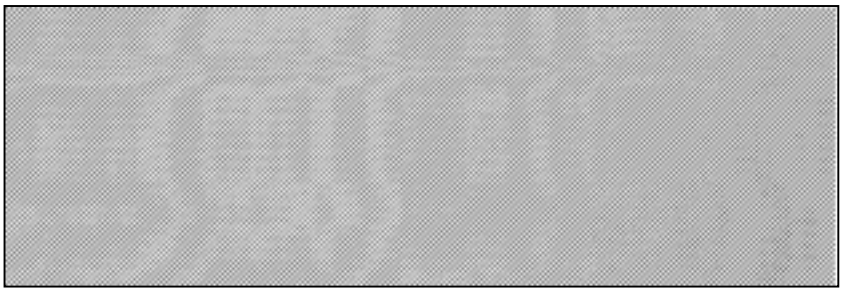
14. If necessary, the print test may now be repeated from step **4**.

15. When you have finished performing the test print operation, turn the printer's power OFF then back to ON and check that the LCD Message Display shows ON LINE and that the ON LINE and POWER LED lights are illuminated.

2.11 Test Print (cont.)

NOTE:
The five printed labels of bar codes and the five printed labels of characters will be 76mm in length regardless of the actual size of the labels installed. However the slant line printed labels will be the same size as the installed labels.

Example of the slant line test print label



Example of the bar code test print label

Example of the character test print label

3. PRINTER OPERATION

This section provides a functional overview of how the printer receives print data from your host computer and how it will operate in the various operating conditions. This section also shows you how to install the TEC Printer Drivers into your computer.

3.1 Overview

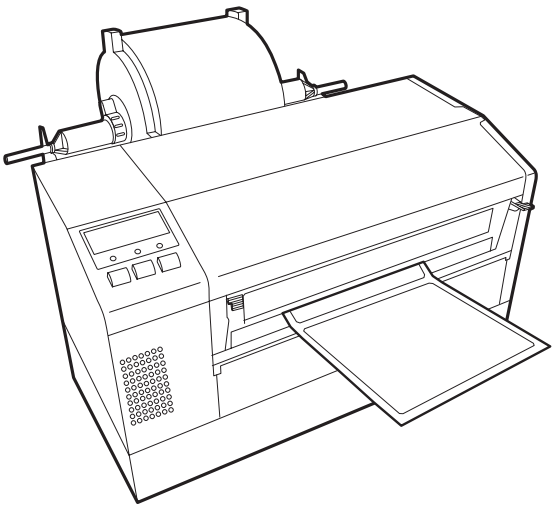
Labels will be created on the host computer connected to your printer, using either a commercially available label creation program or using the TEC Command Program Language. Or if the optional PCL5 Interface Board has been installed, the printer will be able to print from any software using the HP-PCL5 Printer Command Language. The label information sent from your host computer will consist of a series of commands that inform the printer of the labels size, layout, orientation, and number of copies to print and will also contain the print data including scaleable text, graphics, and bar codes. The printer electronics will decode the commands and manipulate the data to create a bit graphic image of the label that will be stored in the printer's memory. The printer electronics will then transfer the image as a series of dots, one line at a time, to the thermal print head.

The thermal print head consists of a line of 2560 thermal elements with each element shaped like a tiny dot. The dot line is 8.5 inches (216.8 mm) in length resulting in a dot density of 300 DPI. As the paper is advanced through the printer by the paper feed mechanism, the thermal head continuously prints the image as a series of dot lines at a resolution of 300 dots per inch, horizontally and vertically.

Precision feeding and back feeding of the label or tag stock is accomplished through the use of specialized stepping motors and photo-sensors. The label gap sensor or the black mark sensor tells the printer electronics when the label or tag stock is properly positioned under the head for accureate printing.

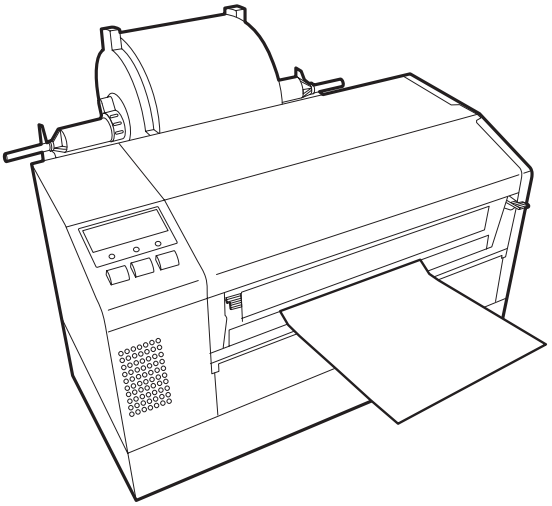
3.2 Operating Modes

1. **Tear Off Mode –** In this operation mode, when the media has stopped feeding after printing, the label should be in a position that the operator can simply pull the media downward against the tear off bar to tear off the printed label.

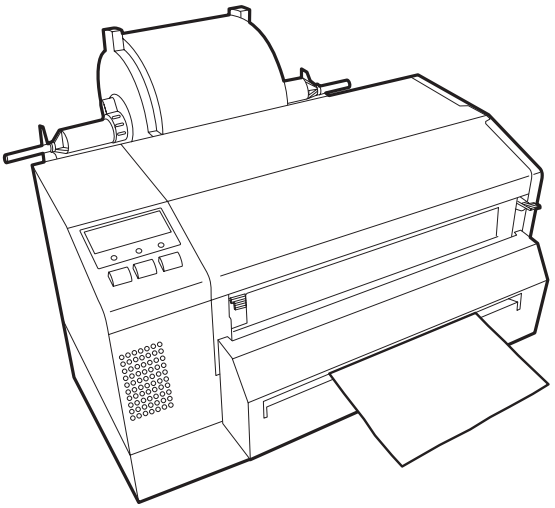


3.2 Operating Modes (Cont.)

2. **Continuous (or batch) mode** – In this mode, the labels will be continuously printed and fed until the number of labels specified in the label issue command has been printed. After the last label of the series has been printed the labels can be torn free from the supply roll in a similar manner as described in the tear off mode above.



3. **Cut Mode -** In the cut mode, as each label is printed it is fed forward to the cutter mechanism where the swing cutter mechanism will precisely cut the label off from the supply roll. The feed mechanism will then backfeed the label or card stock until it is properly positioned under the print head to print the next label in series. The issue command sent to the printer from the Host can inform the printer to cut each label or tag after each has been printed or to perform the cut only after a certain number of labels or tags have been printed and issued.



CAUTION!

- *Be sure to cut the backing paper of label. Cutting labels will cause the glue to stick to the cutter, which may affect the cutter quality and shorten the cutter life.*
- *Use of tag paper when the thickness exceeds the specified value may affect the cutter life.*

NOTE:

Cut mode is available only when the optional cutter module (B-7208-QM) is installed.

3.3 Installing the Printer Drivers

The TEC MONO Printer Driver is a file of driver information files to be used to install TEC monochrome thermal printers to operate under Windows 95®, Windows 98®, and Windows NT®.
Installation is accomplished by first downloading the set of printer driver files from the TOSHIBA TEC Web Site and transferring the printer drivers to the hard drive of your host computer. Then using the standard Windows Add Printer function, the driver for the B-852 will be installed. Once the driver has been installed, then it becomes quite easy to select the printer properties dialog and set the parameters for printing.

3.3.1 System Requirements

NOTE:

Windows 3.1® is not supported. Windows 3.1®, Windows 95®, Windows 98®, and Windows NT® are registered trademarks of Microsoft Corporation. Pentium® is a registered trademark of Intel Corporation

1. System

a. IBM Compatible PC running Windows 95® or Windows 98® or Windows NT® Version 4.0 Workstation or Windows NT® Version 4.0 Server.
b. Pentium® processor, 133MHz or greater recommended.
c. Installed memory of 16MB minimum (32MB recommended).
d. Available Hard Disk space of 10MB or more.

2. Interface

a. The RS-232C interface
b. Centronics interface

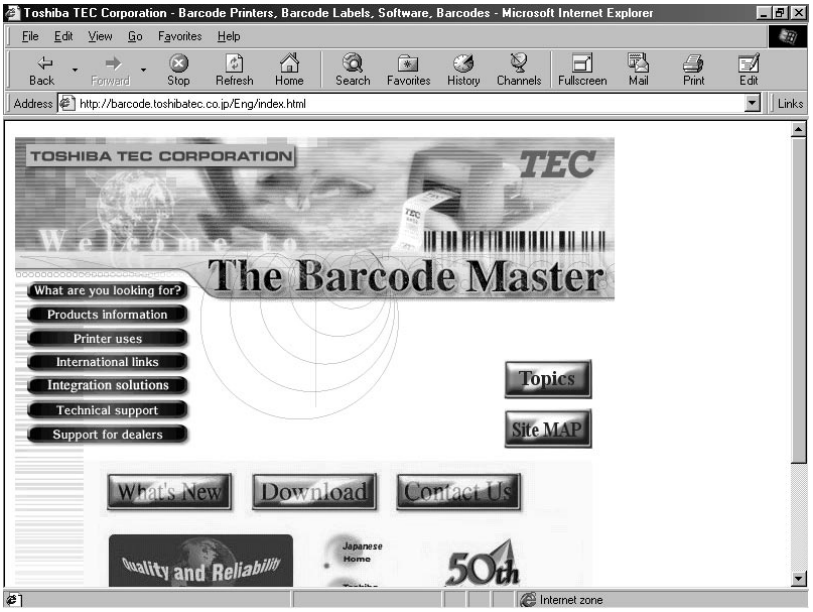
3.3.2 Driver Download

The following procedures will show you how to obtain the set of TEC MONO Printer Drivers from the TOSHIBA TEC Barcode Web Site.

1. Access the TOSHIBA TEC Barcode World Wide Web Site at the following URL:

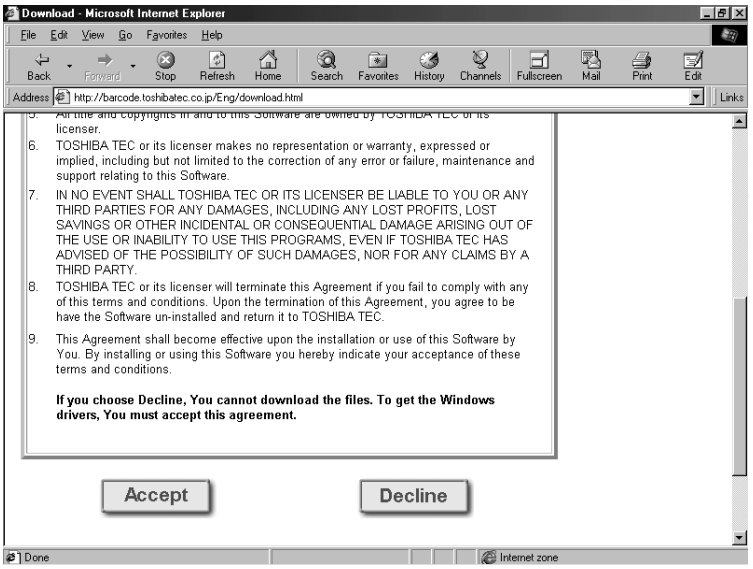
http://barcode.toshibatec.co.jp

After accessing the above web site, the screen will appear as shown below.



3.3.2 Driver Download (Cont.)

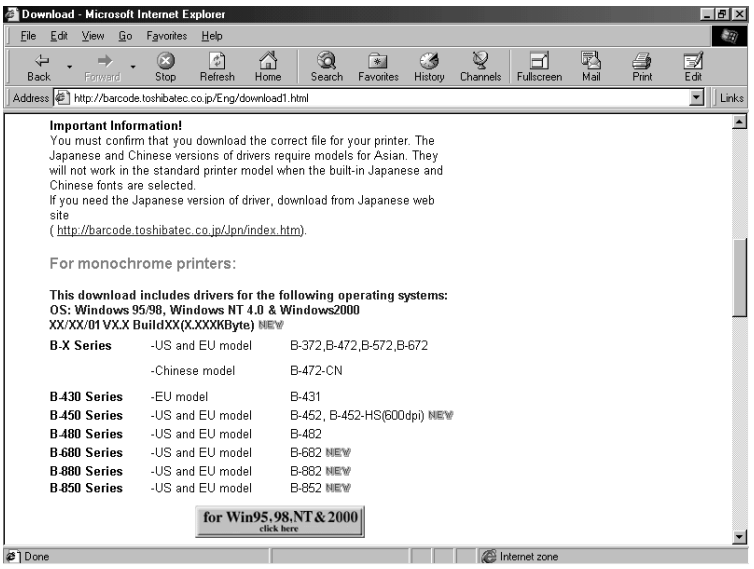
2. In the previous screen, click on the **Download** button. The screen will change to the license agreement screen as shown below.


Download - Microsoft Internet Explorer
File Edit View Go Favorites Help
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://barcode.toshibatec.co.jp/Eng/download.html
Links
licenser.
6. TOSHIBA TEC or its licenser makes no representation or warranty, expressed or implied, including but not limited to the correction of any error or failure, maintenance and support relating to this Software.
7. IN NO EVENT SHALL TOSHIBA TEC OR ITS LICENSER BE LIABLE TO YOU OR ANY THIRD PARTIES FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE ARISING OUT OF THE USE OR INABILITY TO USE THIS PROGRAMS, EVEN IF TOSHIBA TEC HAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, NOR FOR ANY CLAIMS BY A THIRD PARTY.
8. TOSHIBA TEC or its licenser will terminate this Agreement if you fail to comply with any of this terms and conditions. Upon the termination of this Agreement, you agree to be have the Software un-installed and return it to TOSHIBA TEC.
9. This Agreement shall become effective upon the installation or use of this Software by You. By installing or using this Software you hereby indicate your acceptance of these terms and conditions.
If you choose Decline, You cannot download the files. To get the Windows drivers, You must accept this agreement.
Accept
Decline
Done
Internet zone

3. Read the license agreement and if you accept the terms of the agreement then click on the **Accept** button. If you do not agree to the terms then click on the **Decline** button, but you will be unable to download the drivers.

4. Upon clicking on the **Accept** button the screen will change to list the available TEC driver sets. Scroll to locate the screen that lists the set of Monochrome drivers and lists the B-852 driver as shown by the screen display below.

> ***NOTE:***
> *Driver File name, capacity and date of the driver may be changed without prior notification.*
> *For the latest information about the driver, please contact your authorized TOSHIBA TEC representative.*

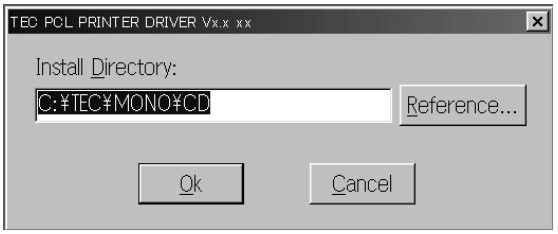

Download - Microsoft Internet Explorer
File Edit View Go Favorites Help
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit
Address http://barcode.toshibatec.co.jp/Eng/download1.html
Links
Important Information!
You must confirm that you download the correct file for your printer. The Japanese and Chinese versions of drivers require models for Asian. They will not work in the standard printer model when the built-in Japanese and Chinese fonts are selected.
If you need the Japanese version of driver, download from Japanese web site
(http://barcode.toshibatec.co.jp/Jpn/index.htm).
For monochrome printers:
This download includes drivers for the following operating systems:
OS: Windows 95/98, Windows NT 4.0 & Windows2000
XX/XX/01 VX.X BuildXX(X.XXXKByte) NEW
B-X Series -US and EU model B-372,B-472,B-572,B-672
-Chinese model B-472-CN
B-430 Series -EU model B-431
B-450 Series -US and EU model B-452, B-452-HS(600dpi) NEW
B-480 Series -US and EU model B-482
B-680 Series -US and EU model B-682 NEW
B-880 Series -US and EU model B-882 NEW
B-850 Series -US and EU model B-852 NEW
for Win95,98,NT & 2000
click here
Done
Internet zone

5. Click on the **for WIN95,98&NT** button to begin the download of the driver set file (“Bdrv_Vx_x_Buildxx.exe”). Be sure to note into which directory of your hard drive that the browser transfers the file.

6. Exit from your browser, and using your Windows Explorer, locate the downloaded file (“Bdrv_Vx_x_Buildxx.exe”). This file will contain the setup program that will be needed to build the driver files on your host computer’s Hard disk.

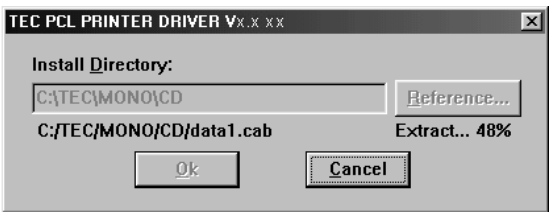
3.3.2 Driver Download (Cont.)

7. When you locate the file, such as Bdrv_Vx_x_Buildxx.exe, double click on the file to begin extracting the setup program files. The screen should appear as shown below.



8. To extract the driver to the default directory (C:\TEC\MONO\CD) click on the **OK** button to begin the extraction. Otherwise click on the **Reference** button to select a different directory as shown by the screen display below.

9. Select the desired directory to extract the files to and then press the **OK** button to begin the extraction as shown by the following screen display. (The default directory is shown as the install directory)

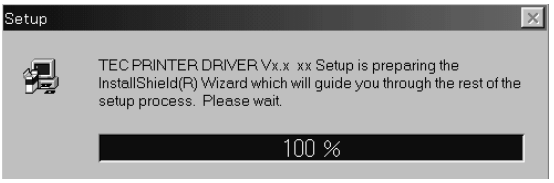


3.3.3 Driver Installation

Now that the TEC MONO Driver Set has been installed to your hard disk, the driver setup program must be run to extract the driver information files to your hard disk preparatory to your adding the B-852 printer function to your host computer.

> ***NOTE:***
> *For further information about the installation procedure for Windows NT®, please contact your authorized TOSHIBA TEC representative.*

1. Locate the driver set that you downloaded in the previous steps. If you used the default directory, C:\TEC\MONO\CD, go to that directory.
2. From that directory, run the Setup.exe program to start the Install Shield Wizard. The screen will change to that shown below.


Setup
TEC PRINTER DRIVER Vx.x xx Setup is preparing the InstallShield(R) Wizard which will guide you through the rest of the setup process. Please wait.
100 %

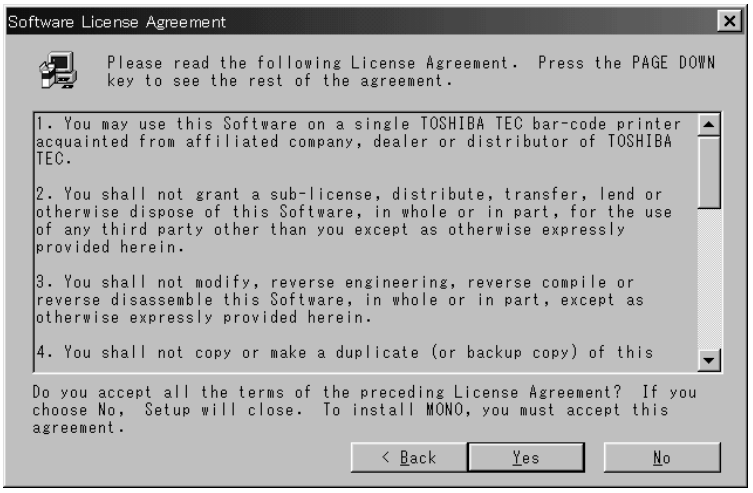
3.3.3 Driver Installation (Cont.)

3. After the Install Shield temporary files have been loaded, the display will change to the Welcome screen as shown below.

Welcome
Welcome to the MONO Setup program. This program will install MONO on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next >
Cancel

4. Click on the **Next** button to continue the installation. The screen will change to the Software License Agreement screen below.

> ***NOTE:***
> *If you click the **NO** button in the License Agreement screen, the program will not be installed*


Software License Agreement
Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.
1. You may use this Software on a single TOSHIBA TEC bar-code printer acquainted from affiliated company, dealer or distributor of TOSHIBA TEC.
2. You shall not grant a sub-license, distribute, transfer, lend or otherwise dispose of this Software, in whole or in part, for the use of any third party other than you except as otherwise expressly provided herein.
3. You shall not modify, reverse engineering, reverse compile or reverse disassemble this Software, in whole or in part, except as otherwise expressly provided herein.
4. You shall not copy or make a duplicate (or backup copy) of this
Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install MONO, you must accept this agreement.
< Back
Yes
No

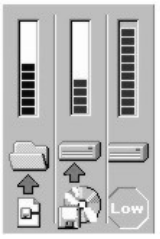
5. Carefully read the Software License Agreement. To accept the conditions of the agreement, click the **Yes** button. If you do not accept the conditions click on the **No** button.

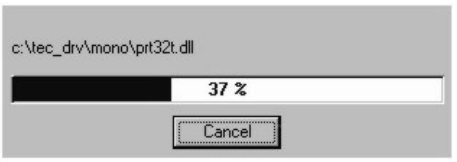
Choose Destination Location
Setup will install MONO in the following folder.
To install to this folder, click Next.
To install to a different folder, click Browse and select another folder.
You can choose not to install MONO by clicking Cancel to exit Setup.
Destination Folder
C:¥TEC_DRV¥MONO
Browse...
< Back
Next >
Cancel

6. Upon clicking on the **Yes** button in the above screen, the display will change to the Choose Destination Location screen shown below

3.3.3 Driver Installation (Cont.)

7. Click on the **Next** button to accept the default Destination Folder (TEC_DRV\MONO), or click on the **Browse** button to select a different folder.
8. Upon clicking on the **Next** button the driver files will be extracted and copied to the selected folder as shown by the display below.





9. After all of the files have been transferred the display will change to the Setup Complete screen below. Click on the **Finish** button to end the Setup and return to the Windows desktop.

Setup Complete
Setup has finished installing MONO on your computer.
Setup can launch the Read Me file and MONO. Choose the options you want below.
Click Finish to complete Setup.
< Back
Finish

3.3.4 Add Printers

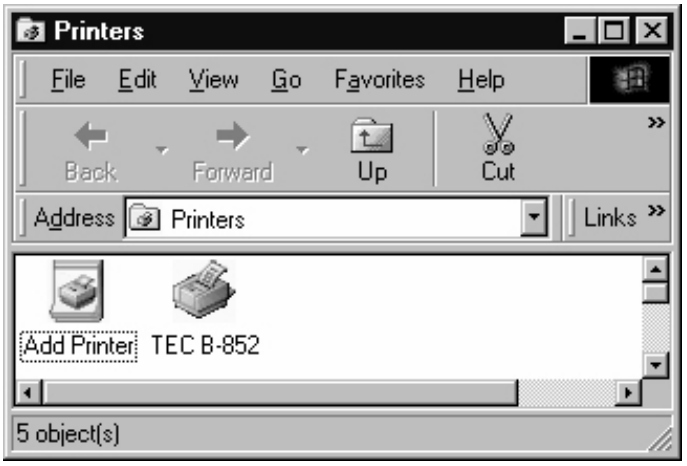
> ***NOTE:***
> *If you want to use a shared network printer, you can set it up quickly by browsing for it in **Network Neighborhood**, clicking the printer's icon, and then clicking **Install** on the **File** menu*

The previous steps have shown you how to download and install all of the TEC MONO Printer Drivers. Before you can use the B-852 printer, its driver must be added using the Windows Add Printer Function.

1. Click on the Windows **Start** button and then move the mouse pointer to highlight Settings and click on the **Printers** icon.
2. Follow the procedures as outlined in the on screen menus of the Add Printers Wizard.
3. Make sure to click on the Have Disk button in the Add Printer Wizard and indicate the C:\TEC_DRV\MONO folder as the source for the TEC Printer Driver information files.

3.3.4 Add Printers (Cont.)

4. After the TEC Printer Driver has been successfully loaded, the Printers screen should appear as shown below, showing the TEC B-852 as being successfully installed.



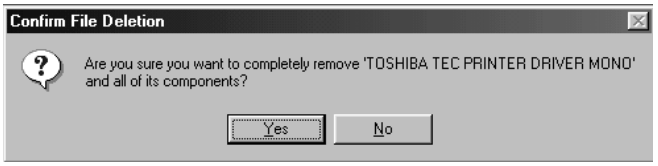
3.3.5 Uninstalling the TEC B-852 Printer Driver

If it becomes necessary to remove the TEC B-852 printer driver from your host computer, then it can be removed as follows.

> ***NOTE:***
> *Do not uninstall the printer until you have closed all applications.*

> ***CAUTION!***
> *If you are going to install an upgraded version of the TEC printer driver you must first uninstall the folder "TOSHIBA TEC PRINTER DRIVER MONO" by the steps outlined here.*

1. In the Printers screen shown above, click on the **TEC B-852** icon to highlight it.
2. Click on the **File** menu, and when the File sub menu appears, click on **Delete**. The icon for the TEC B-852 will disappear from the Printers screen.
3. Access the Windows Control Panel and click on the Add/Remove Programs icon.
4. The Add/Remove Program Properties window will appear. In this window, click on **TOSHIBA TEC PRINTER DRIVER MONO** to highlight it and then click on the **Add/Remove** button.


Confirm File Deletion
Are you sure you want to completely remove 'TOSHIBA TEC PRINTER DRIVER MONO' and all of its components?
Yes
No

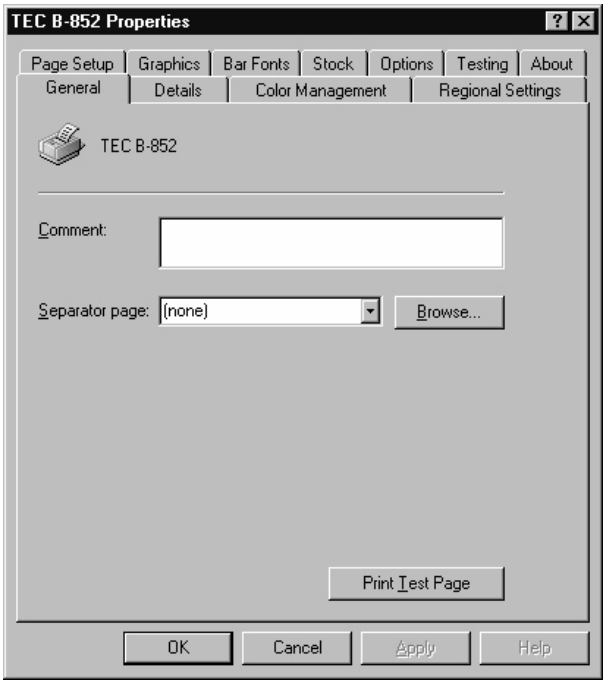
5. In the Confirm File Deletion screen that appears, click on the **Yes** button to complete the removal of the TEC Printer Driver.

3.4 Using the B-852 Printer Properties Menus

This section will outline how to use the B-852 Printer Properties menus to control the printing performance of the printer. The following paragraphs will show you how to access the Printer Properties menus and how to change printer settings through these menus.

1. Access the Printers screen, and then right click on the **TEC B-852** icon to access the printer functions menu as shown below.

2. Highlight and click on Properties in the functions menu as shown in the screen display above. The TEC B-852 Properties screen will appear as shown below.



NOTES:

- *The **Help** button at the bottom of the display appears grayed out for the general tab, but will be active for most of the other tabs. Clicking the **Help** button will provide some extensive help screens.*
- *Clicking on the **?** button at the top of the properties display and then pointing to a function on the properties page will result in the appearance of a small help message concerning that function.*
- *The **Apply** button at the bottom of the display should be clicked after making any changes to the properties, to immediately apply the changes.*

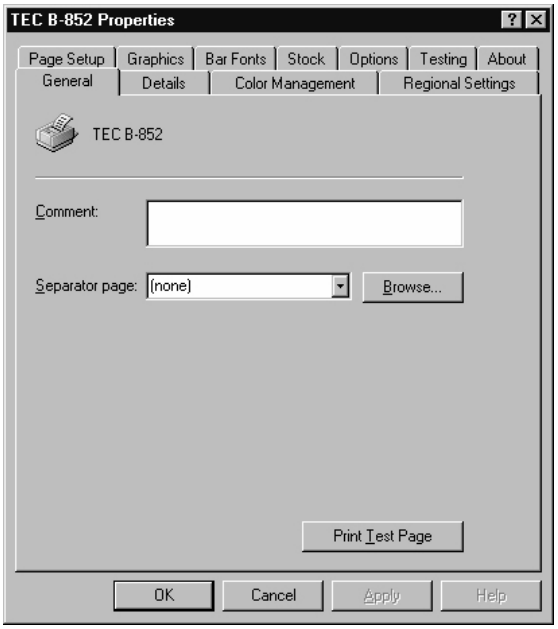
3.4.1 Summary of Properties

The B-852 Properties setting page has eleven tabs to select the different property setting menus. Clicking on a tab will display the menu associated with that property allowing you to make changes to the operation of the printer. The following paragraphs will summarize these properties.

- **General** – When clicking on this tab, you can print a test page and select the composition of separator pages if used.
- **Details** – After clicking on this tab you can make changes to printer port settings, time out settings, and spool settings.
- **Color Management** – This tab would not be used with the B-852 printer as it is used only for associating color profiles with color printers.
- **Regional Settings** – Clicking on this tab will allow you to change the language that the driver displays and also allows you to specify the units of measurements (mm, inches, etc.) displayed by the driver.
- **Page Setup** – Clicking on this tab allows you to specify the default label size and orientation and create new labels or edit existing labels, and to specify the number of labels to be printed.
- **Graphics** – Clicking on this tab allows you to select the printer resolution, dithering method, and print intensity (darker or lighter).
- **Bar Fonts** – Clicking on this tab allows you to add new bar code fonts, edit existing bar code fonts, delete existing bar code fonts, or import and export bar code fonts as *.sbf files.
- **Stock** – Clicking on this tab will allow you to select the print method, sensor type, set label gap, select issue mode and specify cutter use, set print speed (2 or 4 inches per second), and make fine adjustments to print feed, backfeed, cut, and strip positions.
- **Options** – Clicking on this tab allows you to select graphic transfer mode and to adjust the print density in direct thermal or thermal transfer mode.
- **Testing** – Clicking on this tab allows you to print a test label, send a file to the printer, check the thermal head for broken pins, set print logging options and view or clear the log, specify ribbon settings, feed a label, and cut the last printed label.
- **About** – Clicking on this tab will provide you with a way to check the installed driver version, printer capabilities, and system information, and also to read the software license agreement covering this driver.

3.4.2 General Properties Tab

This property will allow you to set up a comment, designate a separator page, or print a test page.



NOTE:

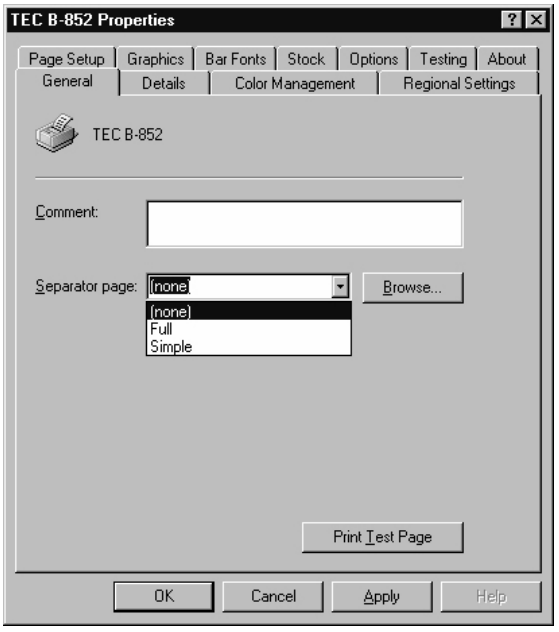
- *If you share this printer, the comment will be displayed on computers that share this printer. However, if you change the comment, the updated version will not appear on the other computers unless the printer is reinstalled.*

NOTES:

- *Separator pages are useful if many people are using your printer or if you are printing multiple documents at once.*
- *A separator page can be a full page that includes graphics or a simple page with text only.*
- *You can use any Windows metafile (.wmf) for a separator page.*
- *You can set up separator pages only if the printer is attached directly to your computer.*

Comment Window - Provides a place for you to add a comment about the printer; for example, when it is available or what it is used for.

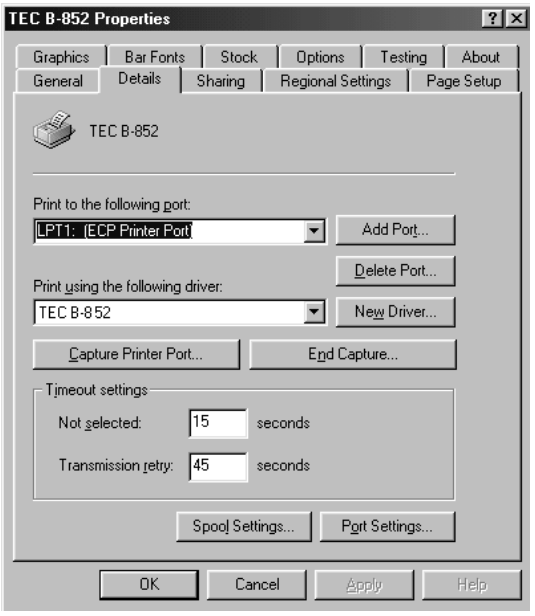
Separator page - Inserts a page between each document printed. If you want to use a custom separator page, click the **Browse** button to locate and specify which separator file you want to print between documents. The display below shows the screen display when the arrow of the Separator page: scrolling text box has been clicked showing the choices for a separator page.



Print Test Page button - Clicking on this button will send a test page to your printer to verify if it has been properly set up for printing.

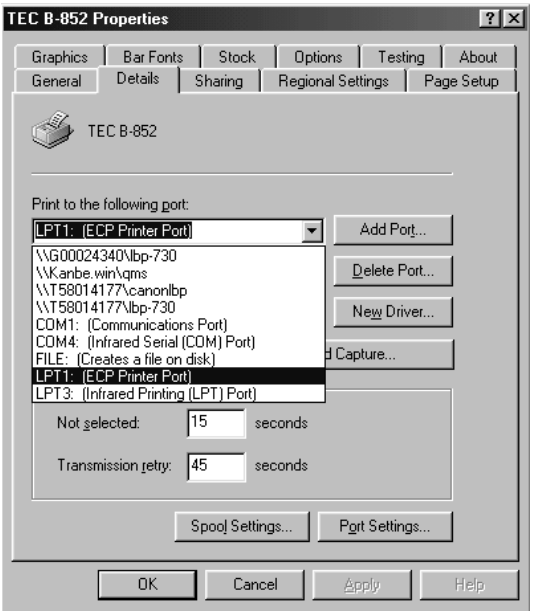
3.4.3 Details Tab

This property will allow the necessary functions needed to select, add or delete a printer port, select a different printer driver, capture additional network printer ports, designate timeout settings, change spool settings, and change the port settings. After clicking on the **Details** tab, the following screen will appear.



> ***NOTE:***
> *The **print to the following port**: scrolling text box displays the port the printer is connected to or the path to the network printer being used. The print path can be changed by typing the network path here, by opening the list and clicking a different port, or by clicking the Add Port button and specifying a new port.*

Select a Printer Port - The **Print to the following port:** scrolling text box, the **Add Port** button, and the **Delete Port** button work together to allow the selection of a different port than the default port for printing. The screen below shows what appears when clicking on the arrow of the **Print to the following port**: scrolling text box.



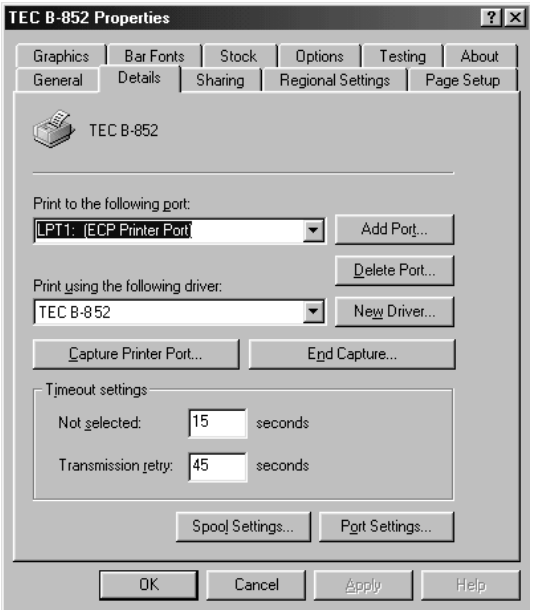
> ***NOTE:***
> *To print to a file, click **File** in the **Print to the following port:** scrolling text box.*

Clicking on the **Add Port...** button will allow adding additional ports to the **Print to the following port:** scrolling text box while clicking on the **Delete Port...** button will allow the deletion of ports currently contained on the **Print to following port:** scrolling text box.

3.4.3 Details Tab (Cont.)

> ***NOTE:***
>
> *When clicking on the arrow in the **Print using the following driver**: scrolling text box, a drop down list appears showing all the current drivers installed on the host computer (as in the display at the right), to allow the selection of a different driver from the list.*

Select a Different Printer Driver - The **Print using the following driver:** scrolling text box works with the **New Driver...**. button to add new printer drivers to the PC and to select a different driver from the one currently being used. The current driver will be highlighted in the list.

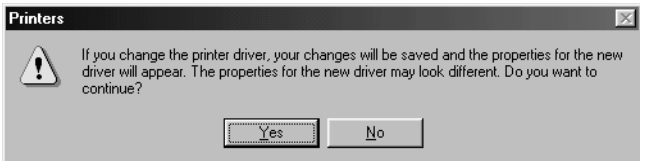


Not Selected Timeout Setting Box - Allows entering a value to specify how much time (in seconds) Windows will wait for the printer to be online before reporting an error.

> ***NOTE:***
>
> *If problems occur when printing large documents, it may become necessary to increase the value of the **Transmission Retry:** timeout setting.*

Transmission Retry Timeout Setting Box - Allows entering a value to specify how much time (in seconds) Windows will wait for the printer to be ready to print before reporting an error.

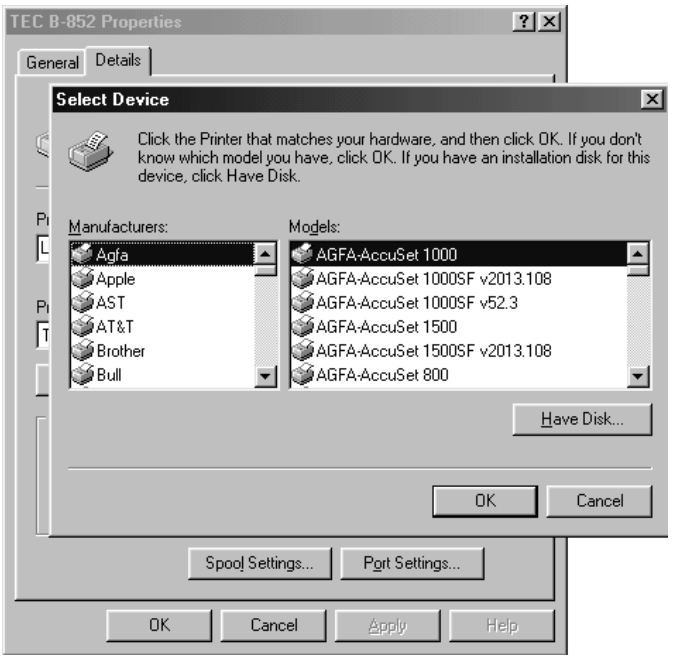
When clicking on any other driver besides the current one from the list, the following screen display will appear.


Printers
If you change the printer driver, your changes will be saved and the properties for the new driver will appear. The properties for the new driver may look different. Do you want to continue?
Yes
No

> ***NOTE:***
>
> *When clicking on the **New Driver** button, the same screen as shown above right will appear. However, when clicking on the **Yes** button, the screen shown at the top of the next page will appear, allowing the installation of an entirely new driver to the host computer.*

Clicking on the **Yes** button will result in the driver being changed, but clicking on the **No** button will prevent the driver from being changed.

3.4.3 Details Tab (Cont.)

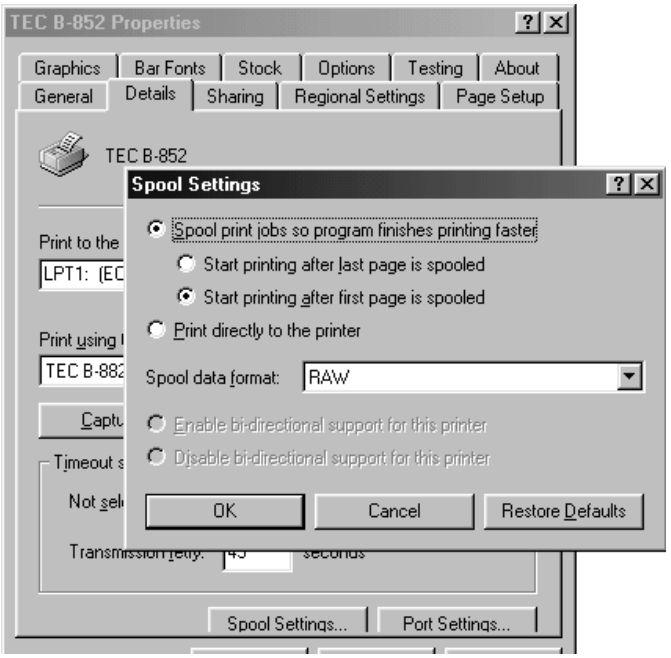


NOTES:

- *Click **Capture Printer Port**.*
- *In the **Device** list, click the printer port desired to be captured. Type the network path, and then click **OK**.*
- *In **Print to the following port**, click the port just mapped.*

Capture Additional Printer Ports - When clicking on the **Capture Printer Port**. button it will allow the capturing of a port (LPT1~LPT9) and mapping it to a network drive. When clicking on **End Capture**...it will end the capture, removing the mapping of a port from a network drive.

Changing Spool Settings - When clicking on the **Spool Settings...** button the following screen will appear to allow changing of the spool settings for the printer driver.



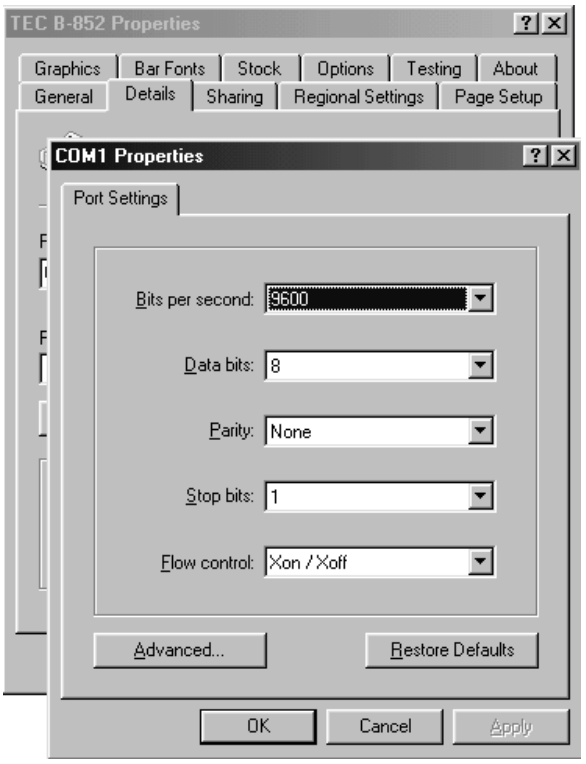
NOTES:

- *If spooling is turned off it will become impossible to pause print jobs.*
- *If this printer is a network printer and spooling is turned off, then the print offline*
- *If problems occur printing with the EMF option then try the RAW option.*

3.4.3 Details Tab (Cont.)

> ***NOTE:***
> *If using the serial interface (COM port) for connection to the B-852 printer, make sure that the settings here agree with the settings set in the printer parameter settings.*

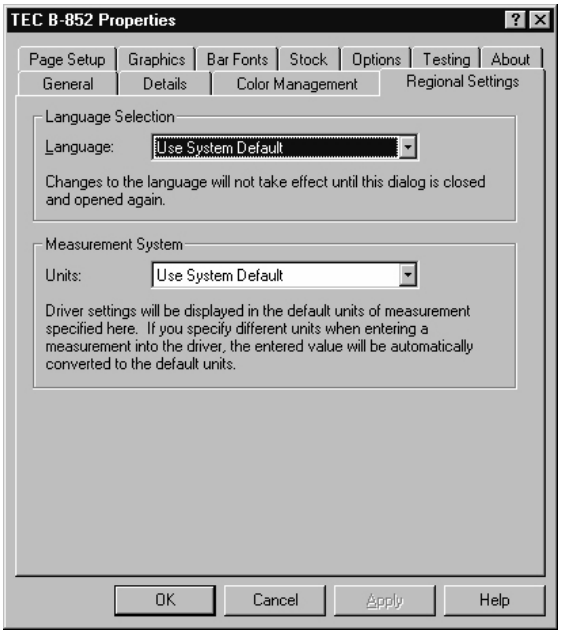
Changing Port Settings - When clicking on the **Port Settings** button, the screen that will appear will depend on whether a parallel port (LPT) or a serial port (COM) is currently highlighted in the **Print to the following port:** scrolling text box. For example, if one of the COM ports is highlighted in the **Print to the following port:** scrolling text box, then the following screen will appear to allow changing the settings for that port.



3.4.4 Regional Settings Tab

> ***NOTE:***
> *By default, the driver will use the Regional Settings as specified in the Windows Control Panel for settings like language, measurement system, and decimal point or comma.*

This properties management screen will allow changing the language and units of measurement to agree with the region in which these printers are being used. After clicking on the **Regional Settings** tab the following display will appear.

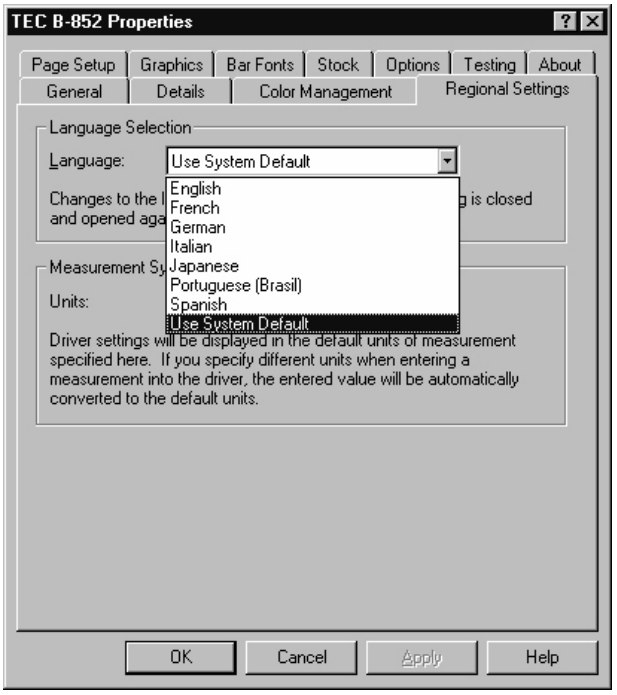


3.4.4 Regional Settings Tab (Cont.)

NOTES:

- *If displaying the driver in a language other than the system default is desired, choose the language here. Changes to the language will not take effect until the dialog is closed and opened again.*
- *For a language to list here, there must be a driver translation in that language and it must be supported by the current operating system. Languages requiring double-byte character sets, such as Japanese or Chinese, may not be available unless running under the corresponding version of Windows.*

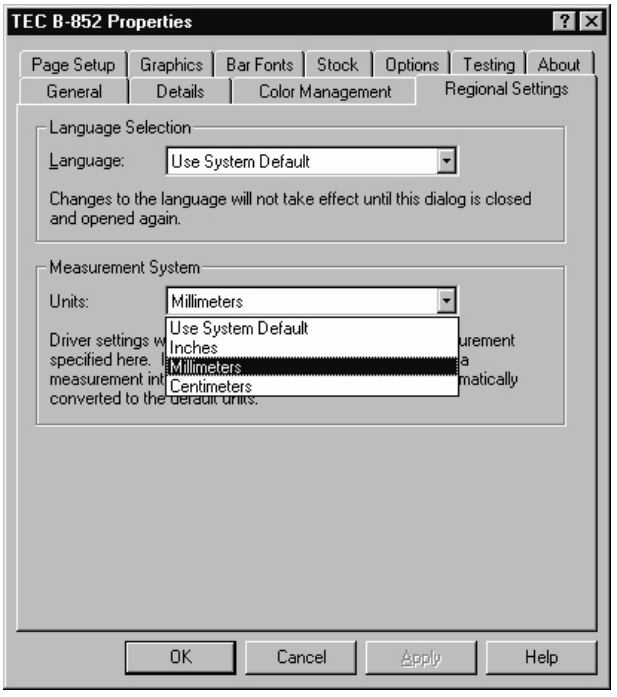
Language Selection - By clicking on the arrow in the **Language:** scrolling text box, the following screen will appear to allow selection of the desired language to be used in the printer driver property screens.



Measurement System Selection - By clicking on the arrow in the **Units:** scrolling text box, the following screen will appear to allow the selection of the desired units of measurement.

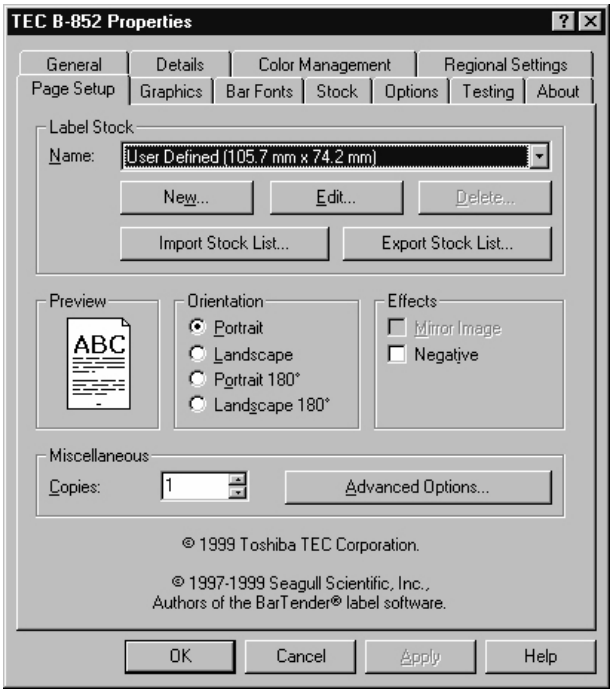
NOTES:

- *It is possible to specify a value in another system of measurement by typing the desired units after the name. For example, if the driver is set to inches, simply type "3.5 cm" into any edit control and it will be automatically converted into "1.38 in".*
- *The "Use System Default" selection will use the system of measurement that is currently selected in Windows Control Panel's Regional Settings.*



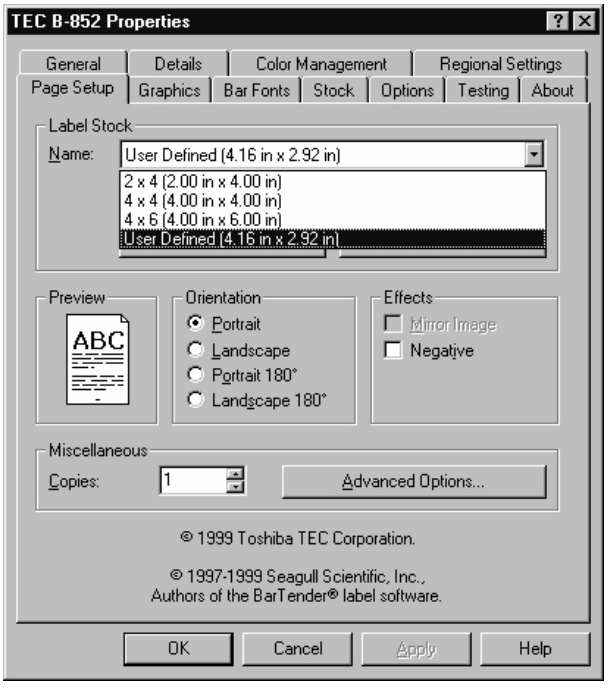
3.4.5 Page Setup Tab

The Page Setup properties management screen is the area in which to specify the label stock, specify the print orientation, specify black on white or white on black (negative) print, specify the number of labels to print, and set some advanced options. After clicking on the Page Setup tab, the following screen will appear.



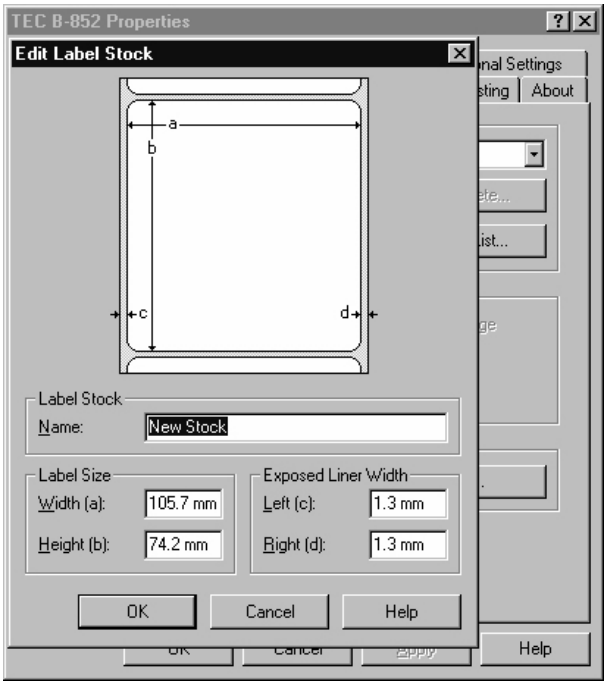
> ***NOTE:***
>
> *When specifying a label stock size different from the existing label stock sizes, either create a new label stock size or edit an existing one. Pushing the New button brings up the same dialog as the Edit button, except that instead of viewing an existing set of label stock settings, it provides a new blank set to set as desired.*

Label Stock - In the preceding display, the area dealing with Label Stock allows configuring the size of the label stock loaded into the printer. Either specify a previously loaded stock by name through the **Name:** scrolling text box, add a new label stock specification to the list, edit a label stock already on the list, import a stock list file (*.sfm), or export the current stock list as a *.sfm file. Clicking on the arrow of the **Name:** scrolling text box, will reveal a drop down list showing all the current stock listing as shown in the screen display below.



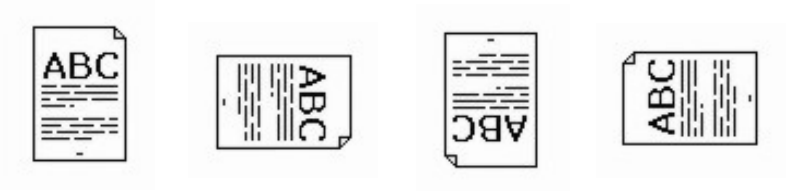
3.4.5 Page Setup Tab (Cont.)

By clicking on either the **New** button or the **Edit** button, the following screen display will appear.



- When the **New** button has been pressed, a new label name, width, height, and exposed liner widths may be specified and when the **OK** button is clicked it will be added to the stock list.
- When the **Edit** button has been pressed, the highlighted label in the stock list can have its name, width, height, and exposed liner width changed to new values.

By clicking on the **Portrait, Landscape, Portrait rotated 180°,** or **Landscape rotated 180° radio buttons,** the print orientation can be changed. The preview page to the left of the orientation buttons will change to reflect the selected orientation as shown below.



Portrait **Landscape** **Portrait rotated 180°** **Landscape rotated 180°**

NOTES:

The options available in the Edit Label Stock dialog are: ***Label Stock Nam****e. Used to display the name of the existing label stock name that is being edited or to enter the name of a new label stock size.* ***Label Siz****e. Used to specify the height and width of a label stock size. Keep in mind that height and width are relative to the orientation of the label. For example, when printing using portrait orientation, there may be a label with a height of 6" and a width of 4". However, when changing the orientation to landscape, the height would change to 4" and the width to 6".*

Exposed Liner Width*. Used to specify the distance between the edges of the paper backing the label and the edges of the label.*

NOTE:

Most applications allow defining page orientation from within the application, but many do not allow 180° rotation of the image. Choose the default page orientation from those shown at the right.

3.4.5 Page Setup Tab (Cont.)

NOTE:

*The **Copies** option is usually set to one because most programs know how to specify a copy count to the driver. Manually specify this driver setting when using programs that don't properly take advantage of a printer's copying capability. (In these cases, be sure to leave copies set to "1" in the program, otherwise it will print many more copies than desired!).*

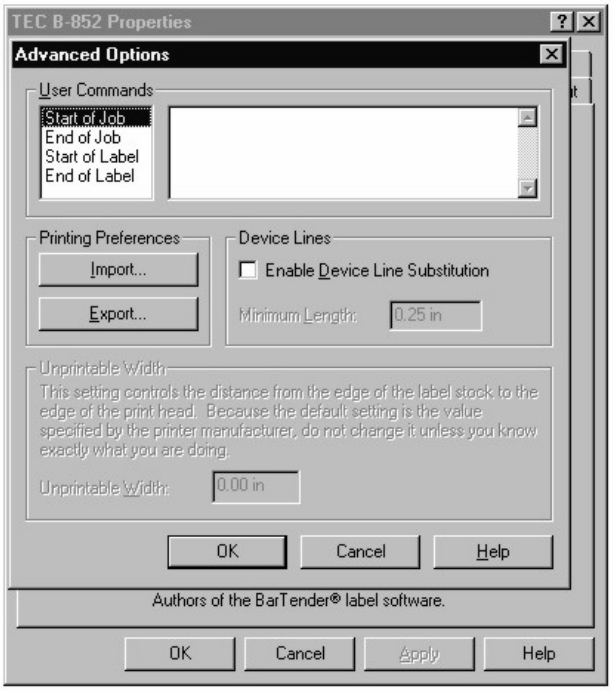
NOTE:

*In order to make any changes to the **User Commands**, it will be necessary to have knowledge of the command programming language used to send label commands to the printer. Information about the TEC Printer Command Language is provided in TEC's External Equipment Interface Manual. Please contact your TOSHIBA TEC representative for further information concerning this manual.*

When the **Negative** check box has been checked, the print will be white on black. When this check box is unchecked, the print will be black on white. The preview page to the left of the orientation buttons will reflect negative or positive print selection.

The up and down arrows of the **Copies:** scrolling text box can be clicked to increase or decrease the number of copies to be printed.

When the **Advanced Options** button has been clicked, the screen display will change to that shown below.



Additional Advanced Options

NOTE:

The Advanced Options dialog allows control of the printer options for which the printer driver does not provide explicit control. This is done with four fill-in data fields for user-defined commands. Also for importing or exporting previously specified printer driver settings.

Printing Preferences - The following settings will allow saving or exporting the settings of this printer driver so that they may be imported into a different or freshly installed printer driver. It also allows importing previously saved settings to replace the current settings of this printer driver. The settings will be exported into a file name created and will have a SDM extension (*.sdm)

- **Import** - Allows importing previously saved printer driver settings. The settings that can be imported depend on which printer driver is being used.
- **Export** - Allows exporting the settings of this printer driver. The settings that can be exported depend on which printer driver is being used.

3.4.5 Page Setup Tab (Cont.)

Enable Device Line Substitution - Most applications draw lines as a graphic, rather than using line commands built-in to the printer. With this feature enabled, the driver will try to use the printer's line commands to draw lines and boxes whenever possible. Some applications do not always print correctly with this feature enabled. Enabling this feature will cause vertical or horizontal lines to be recognized as a printer command rather than a graphic.

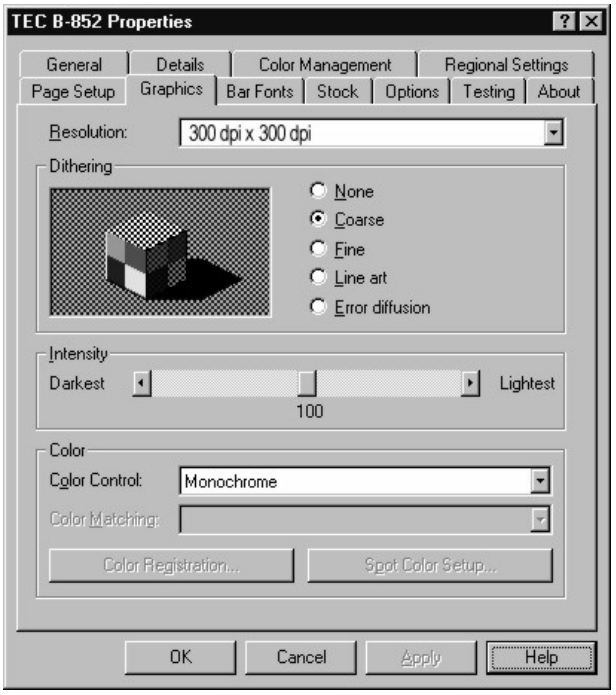
Minimum Length. - The minimum length of a line that is to be recognized as a printer command.

WARNING!
This Setting is for advanced users only. Do not change this setting otherwise.

Unprintable Width - Setting the Unprintable Width allows making minor adjustments in the horizontal positioning of the printed image on the label. The distance from the edge of the label stock being used to the print head may be slightly different than the default setting in the driver due to manufacturing differences. Making small adjustments to this number can help compensate for the difference and obtain a more accurate object placement.

3.4.6 Graphics Tab

The options that are available on the Graphics property page allow specifying how text and images will be printed on the label. When clicking on the **Graphics** tab the following screen display will appear.



Resolution - This scrolling text box will show the printers possible resolution settings. On the B-852 only one resolution is available, 300 dpi x 300 dpi.

3.4.6 Graphics Tab (Cont.)

NOTE:

Many Windows programs allow designing with different colors and shades of gray, even though the thermal printer only prints in one color: black. By outputting different black dot-patterns, each color can be translated into what appears to be a different shade of gray on the printer.

Dithering - Creating the illusion of different shades of gray by varying the pattern of dots. Close observation reveals that varying the patterns of black and white dots produces different shades of gray. There are no gray dots at all. The more dither patterns that a device or program supports, the more shades of gray it can represent. This screen allows making the following selections for dithering.

- **None**. Outputs the sharpest images when printing bitmap graphics that contain only black and white, but no colors or grays.
- **Coarse.** Does the best job of printing lots of different shades of gray, but will but will soften the edges of graphic images the most.
- **Fine.** Retains greater clarity in higher resolution graphic images than than the "Coarse" setting, but can't print as many different shades of gray.
- **Line Art**. The "Line Art" dithering method uses patterns optimized for printing line art, rather than general purpose images.
- **Error Diffusion**. Uses a more complex algorithm to avoid the patterned look of the "Coarse" or the "Fine " setting.

Intensity - The intensity of the printed label can be adjusted with the slider bar from 0 (darkest) to 200 (lightest). Default value is 100.

Color - the only selection here on the B-852 series is Monochrome.

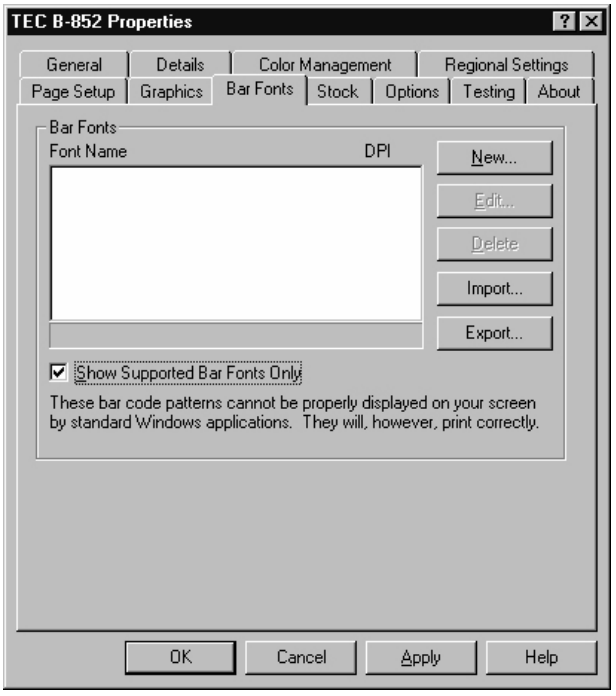
3.4.7 Bar Fonts Tab

NOTES:

- *Most thermal printers have internal support for many different bar code symbologies. Most Windows applications are unable to access these bar codes directly. However, it is possible to create an artificial font that represents a bar code, and then this font will be listed and can be selected within any Windows application that supports printer fonts. At print time, the font is converted by the driver into the desired bar code.*
- *Some symbologies will have minimum and maximum data lengths, or only accept certain characters. The bar font functionality in this driver will properly filter, format and add necessary characters to bar codes before they are printed.*

This Property Page will allow adding, deleting, modifying, importing, exporting, and viewing currently defined bar code fonts. These fonts will be listed in many Windows applications that normally do not support printing bar codes. Although they will not appear as bar codes on the screen, they will print as bar codes. An unlimited number of bar fonts can be created, each of which may have different bar code parameters.

Upon pressing the **Bar Fonts** tab the screen display below will appear.

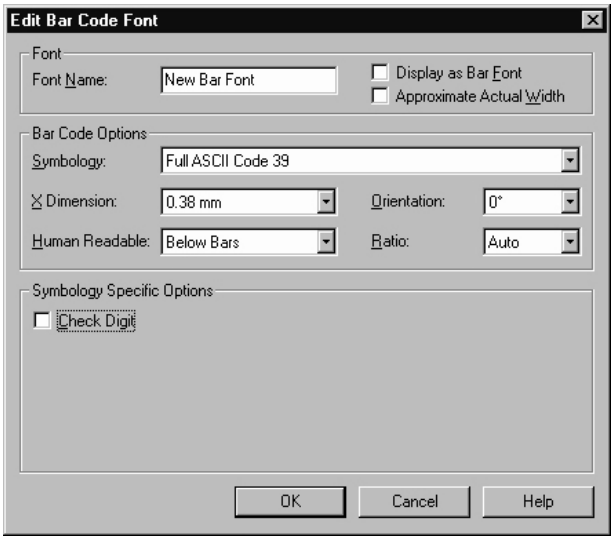


3.4.7 Bar Fonts Tab (Cont.)

The above window has the following functions:

- **Bar Fonts View List**. This window will display a list of all bar code fonts currently set up and their resolution they were created at in dots per inch (dpi). The status bar at the bottom of this list will display information about the currently selected font.
- **New** button. Allows adding a new bar font. If a font in the view window is selected, the new bar code font settings will be copied from the currently selected bar code font.
- **Edit** button. Allows modifying the currently selected bar code font.
- **Delete** button. Allows removing the currently selected bar code font.
- **Import** button. Allows importing a list of bar code fonts that have previously been exported.
- **Export** button. Allows exporting the current bar code font list to a file. This file can be loaded into the driver on a different host computer, and even a different operating system.
- **Show Supported Bar Fonts Only**. Checking this box limits the view of bar code fonts to only those supported by the current printer.

Whenever the **New** button or the **Edit** button is pressed, the following screen display will appear:



Options on the Edit Bar Code Font property page above, will allow specifying exactly how the printed bar code should appear on the document or label.

3.4.7 Bar Fonts Tab (Cont.)

Bar Code Options:

- **Symbology**. Used to specify the symbology (bar code language) for bar codes.
- **X dimension**. Used to specify bar code density using the narrow bar "X-dimension." (Used with all symbologies except US Postnet.)
- **Bar Code Orientation**. Used to change the vertical or horizontal orientation of an object on the label.
- **Human Readable**. Used to specify the position and visibility of the human readable characters displayed with the bar codes on the labels.
- **Ratio**. Used to specify the wide-to-narrow element ratio of the bar code. (Used with Full ASCII 3-of-9, Regular 3-of-9, Codabar, Interleaved 2-of-5, and MSI Plessey only.)

Symbology Specific Options:

- **Check Digit**. Used to specify whether or not check digits will be added to bar codes. (Used with Full ASCII 3-of-9, Regular 3-of-9, Interleaved 2-of-5, and MSI Plessey only.)
- **UCC/EAN-128**. Used to specify whether or not the Software will automatically add certain characters and perform certain functions required to print UCC/EAN-128 bar codes. (Used with Code 128 only.)
- **Code Set**. Used to specify which of the three Code 128 characters sets (Code A, Code B, or Code C) will be used to print Code 128 bar codes. (Used with Code 128 only.)
- **Version**. Used to select one of several supported sizes of Code One. (Used with Code One only.)
- **UCC/EAN FNC1 Prefix**. Used to specify whether or not the first character in a Code One bar code should be the UCC/EAN FNC1 character. (Used with Code One only.)

Symbology Specific Options: (continued)

- **Correction Level**. Used to specify one of nine levels of error correction for PDF417 bar codes. (Used with PDF417 only.)
- **Truncated**. Used to specify that a trimmed-down version of a PDF417 bar code be printed in order to save space on the label. (Used with PDF417 only.)
- **Row Height**. Used to specify the height of each row in a PDF417 bar code. (Used with PDF417 only.)
- **Columns**. Used to specify the number of columns in the checkerboard data area of a PDF417 bar code. (Used with PDF417 only.)
- **Start Character**. Used to specify which one of the four letters, a - d, will be used as the start character with a Codabar bar code. (Used with Codabar only.)
- **Stop Character**. Used to specify which one of the four letters, a - d, will be used as the stop character with a Codabar bar code. (Used with Codabar only.)
- **Guard Bar Height**. Used to specify the length of the UPC guard bars. (Used with UPC-A, UPC-E, EAN-13, and EAN-8 only.)
- **Supplemental**. Used to append UPC supplemental bar. (Used with UPC-A, UPC-E, EAN-13, and EAN-8 only.)

> ***NOTE:***
>
> *The Edit Bar Code Font property page will display different options depending on which bar code symbology is selected. For example, if the Symbology option is set to "Interleaved 2-of-5," the only symbology-specific option that will be displayed is Check Digit. However, if the Symbology option is set to "Code 128," the symbology-specific area will also display the UCC/EAN-128 and Code Set options.*

3.4.7 Bar Fonts Tab (Cont.)

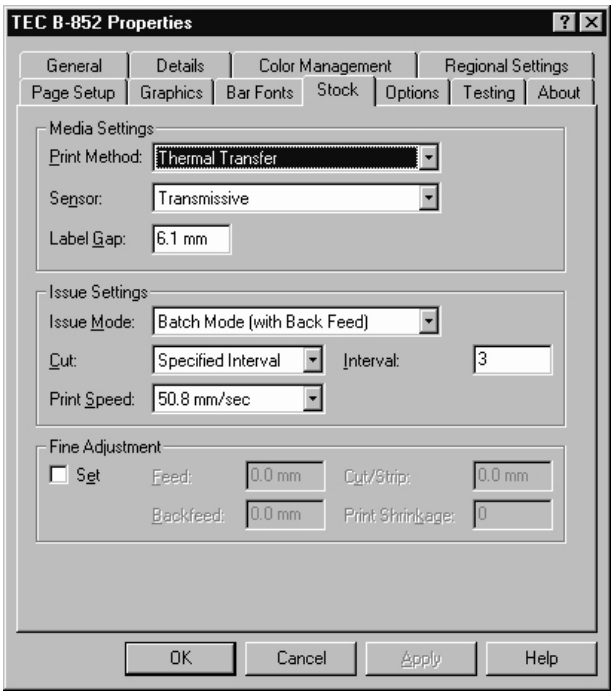
> ***NOTE:***
> *Pressing the Help button on the Bar Code Font property page will access additional information concerning each of the above bar font properties.*

- **Symbol Type**. Used to specify the type and level of error correction to use. (Used with Data Matrix only.)
- **Character Set**. Used to specify the allowable characters for data. (Used with Data Matrix only.)
- **Use Prefix**. Used to add a prefix to a bar code. (Used with Data Matrix only.)
- **Shape**. Used to specify whether the bar code will print in the shape of a square or a rectangle. (Used with Data Matrix only.)
- **White on Black**. Used to reverse the bar code so that it prints white on a black background. (Used with Data Matrix only.)
- **Mode**. Used to specify one of the different modes MaxiCode supports. (Used with MaxiCode only.)
- **Zipper Block**. Used to specify whether or not a MaxiCode zipper block will print with the bar code. (Used with MaxiCode only.)
- **Contrast Block**. Used to specify whether or not a MaxiCode contrast block will print with the bar code. (Used with MaxiCode only.)

3.4.8 Stock Tab

Stock Properties, one of the most important property setting pages. This page allows the selection of media settings (Ribbon use, sensor type, and label gap length), issue settings (batch or strip mode, cutter use, and print speed), as well as fine adjustments (feed length, backfeed length, cut strip position, and print shrinkage).

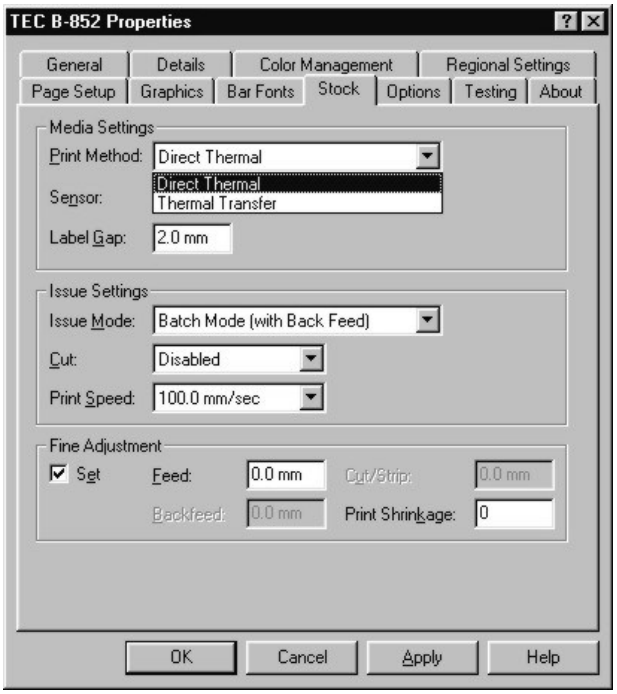
After pressing the **Stock** button, the following screen display will appear.



3.4.8 Stock Tab (Cont.)

> ***NOTE:***
> *The status of this setting in the printer affects the print head temperature. Accordingly, the setting must agree with the label stock that is being used in order to ensure maximum print quality.*

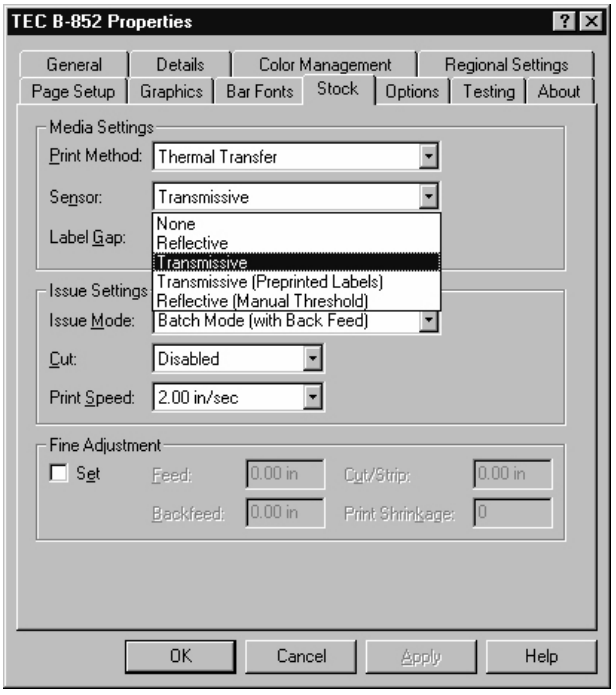
Print Method - The following screen display shows what appears when the arrow of the **Print Method:** scrolling text box has been clicked on.



Direct Thermal - Select this option when printing on thermal labels or tags without the use of a ribbon.

Thermal Transfer - Select this option when printing with a ribbon.

Sensor Select - The following screen display shows what appears when the arrow of the **Sensor:** scrolling text box has been clicked on.



3.4.8 Stock Tab (Cont.)

Sensor Select

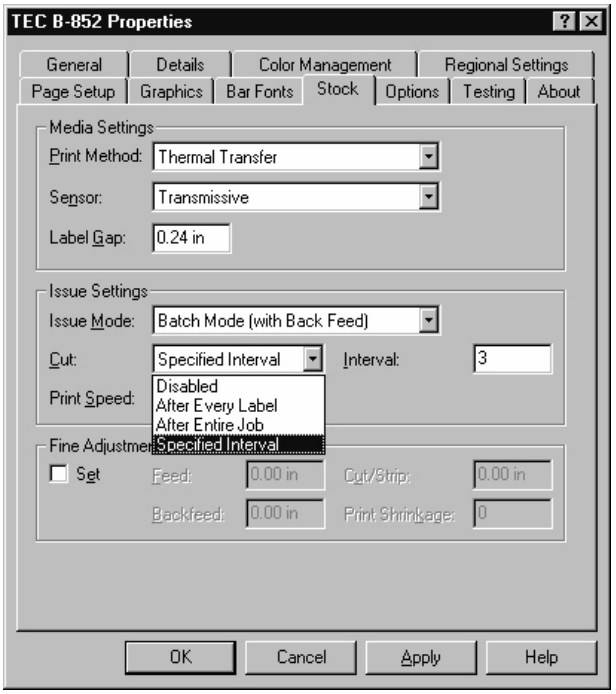
- **None**. Used to specify that either continuous forms (labels without gaps) are being used or that, if there are gaps or marks, they should be ignored.
- **Reflective**. The reflective sensor is used to detect the marks on continuous stock that has black marks on the back.
- **Transmissive**. The transmissive sensor is used to locate the gaps between labels.
- **Transmissive (Preprinted Labels)**. This sets the transmissive sensor's threshold setting to work better with pre-printed label stock.
- **Reflective (Manual Threshold).** This allows setting the reflective sensor's threshold on the printer itself. See the printer's documentation for information on how to set this threshold.

Label Gap - This is the box for typing in the length of the gap between labels. This setting may be set between 2.0 and 20.0 millimeters.

> ***NOTE:***
>
> *In **Issue Mode**, Normal printing is done in Batch Mode (with back feed).*

Issue Mode – When the arrow on this scrolling text box is clicked on, only one option will be available and that is batch mode with back feed since this model printer does not use the strip module.

Cut Mode – When the arrow on the Cut: scrolling text box is clicked on, the following display appears.

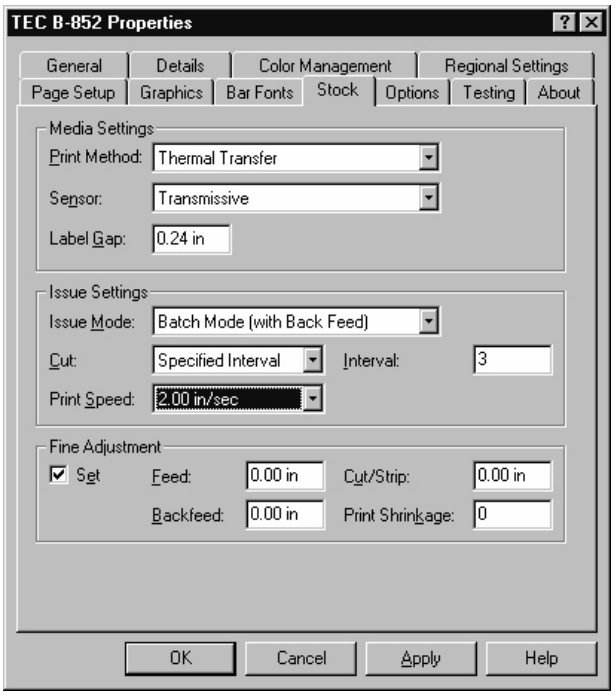


3.4.8 Stock Tab (Cont.)

When a cutter is installed on the printer, the Cut option is used to enable the cutter operation and specify how often labels should be cut. The following settings are available for the Cut option.

- **Disabled**. This is the default setting.
- **After Every Label**. Cuts labels after each label is finished printing.
- **After Entire Job**. Cuts labels only after the entire print job is finished printing.

Specified Interval. Cuts labels after the number of labels specified in the Interval setting. The interval setting window will appear to the right after clicking on Specified Interval to allow entering in the number of labels for the interval.



> ***NOTE:***
> *Before executing any large print runs, confirm that any increased speed settings specified do not result in unacceptable output quality.*

Print Speed - When clicking on the arrow of the **Print Speed:** scrolling text box, it will allow the print speed selections of either 2 inches per second or 4 inches per second.

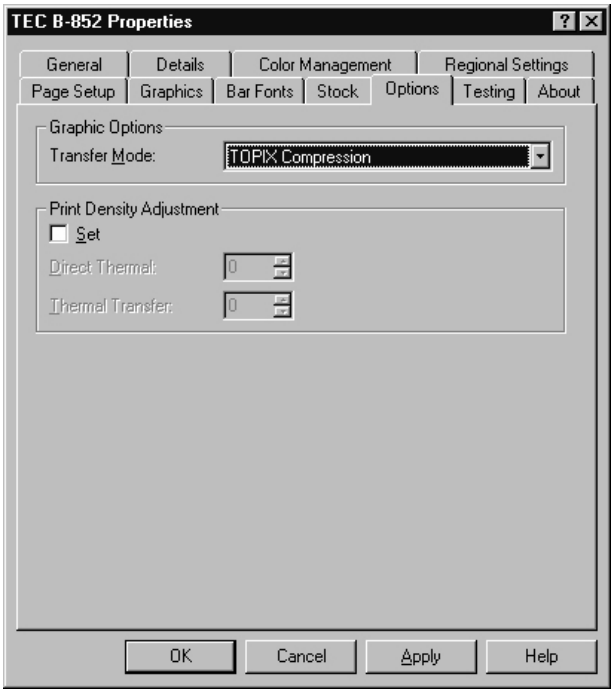
Fine Adjustment – Allows for adjusting the following parameters. Click on the **Set** check box to enable setting fine adjustments through this property page. If not checked, the fine adjustments are grayed out and cannot be changed.

- **Feed** - Specifies the length of label stock that will feed after printing.
- **Backfeed** - Specifies the length of label stock that is retracted before printing. This entry window is only available in cut or strip mode.
- **Cut/Strip Adjustment** - When cutting, this specifies the length of label to feed before cutting the label. This entry window is only available in cut mode.

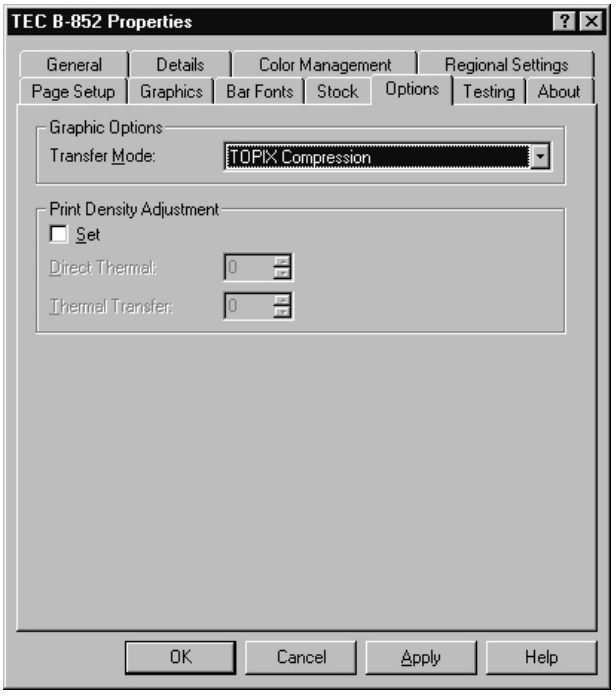
Print Shrinkage - Used to compensate for label print shrinkage or expansion.

3.4.9 Options Tab

This page will allow selecting a graphics transfer mode and to make adjustments to the print tone (lighter or darker print). When selecting the **Options** tab, the following display screen will appear.



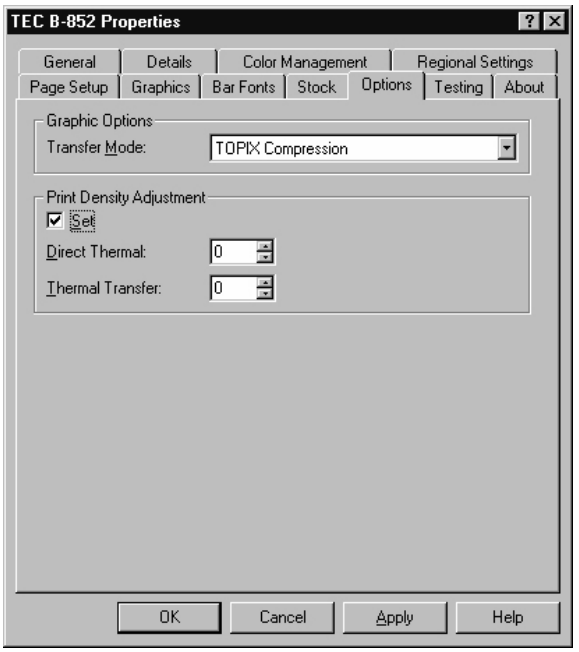
Graphic Options - Allows selecting the method used to download graphics to the printer. The default is to use the fastest method supported by the printer. When clicking on the arrow in the **Transfer Mode:** scrolling text box, the following selection screen will appear.



3.4.9 Options Tab (Cont.)

> ***CAUTION!***
> *Be careful not to set the print density adjustment too high as it can shorten the life of the print head. This also may cause ribbon tearing if set too high in thermal transfer mode.*

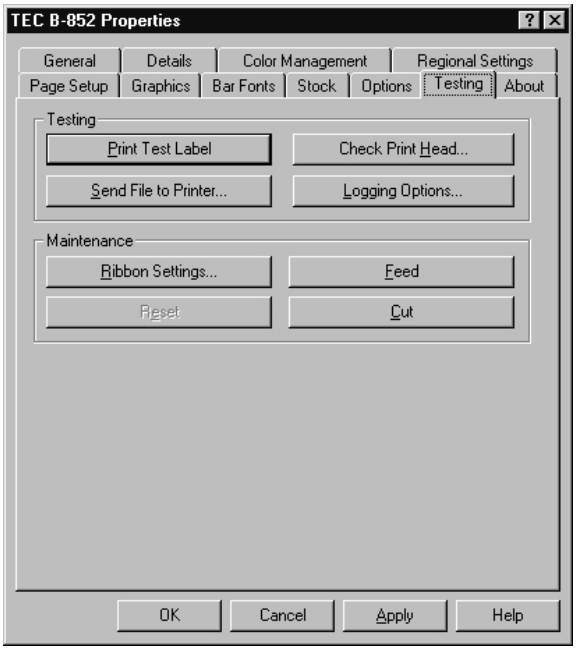
Print Density Adjustment - Clicking on the **Set:** check box is necessary to enable the print density adjustment from this property page. If not checked then no adjustment is possible. When this box is checked, the screen appears as below.



Print density can be set separately for direct thermal and for thermal transfer modes. Click on the increase/decrease arrows to adjust the print density between -10 and +10 in increments of 1.0

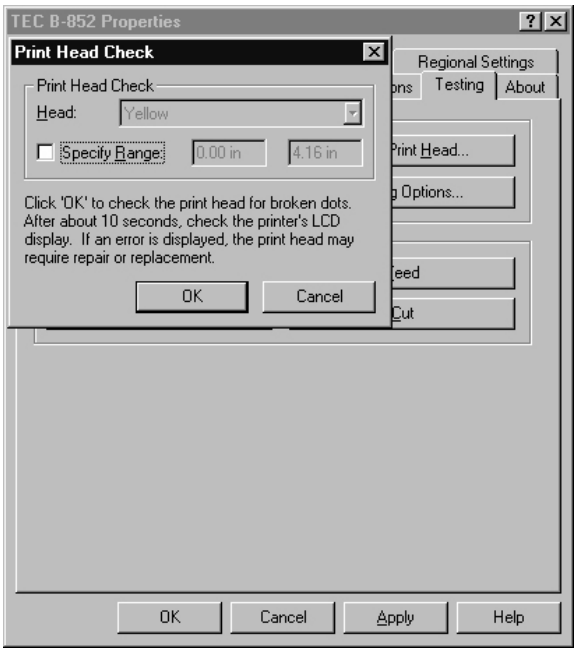
3.4.10 Testing Tab

This page will allow the execution of certain diagnostic tests and some additional maintenance settings. When clicking on the **Testing** tab, the following screen display will appear.



3.4.10 Testing Tab (Cont.)

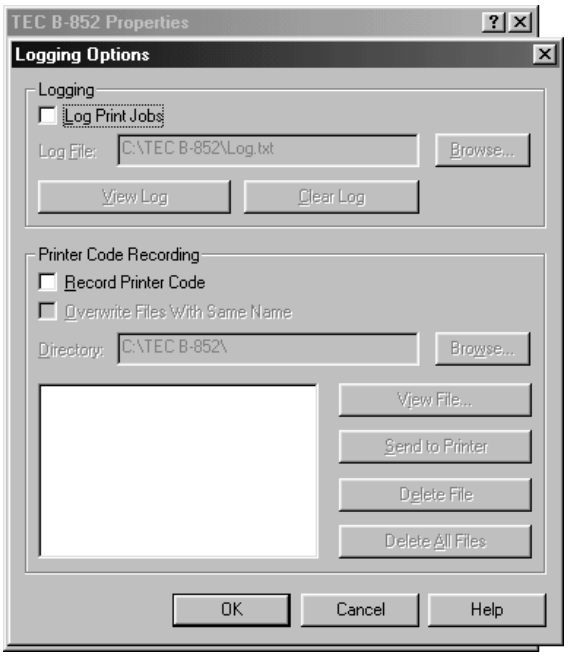
Print Test Label button - Clicking on this button will print a test label to assist in troubleshooting printing problems. This should help verify that the computer being used is communicating with the printer.
Send File to Printer... button - Click this button to send a file (*.prn) irectly to the printer. The driver does no processing on the contents of his file, and it must already consist of commands understood by the rinter.
Check Print Head... button - This option allows execution of the printer's broken pins test. The test will detect if thermal elements in the print head are open. A failed test would suggest a need to replace the print head to ensure perfect print quality. Clicking on this button will bring up the following display window.



- The **Head:** scrolling text box is only available if the printer happens to be a color printer, which will allow selection of one of the color heads.
- The broken pins check is only available on printers containing the broken pins check circuitry. The B-852 printer does indeed contain the broken pins check circuit.
- Clicking on the **Specify Range:** check box will allow entering in a range of elements to check by inputting the starting and ending width into the two "Specify Range" windows.
- Click the **OK** button to start the test. After starting the test check the printer's LCD display for a pass/fail message. Failure of this test indicates that one or more of the head's thermal elements are open and the thermal head will need to be replaced.

3.4.10 Testing Tab (Cont.)

Logging Options - When the **Logging Options** button is clicked, the following display screen will appear.



> ***NOTE:***
>
> *The Logging Options dialog supports logging print jobs and recording printer code to files for debugging purposes. This code can be submitted to support personnel if problems arise in the operation of the driver.*

Logging - Supports logging print jobs and recording printer code to files for debugging purposes. This code can be submitted to support personnel if problems arise in the operation of the driver.

- **Log Print Jobs** - This check box must be checked in order to generate a log file that will list the name of each document and the printer it was printed to. Jobs are logged in the order they are spooled.
- **Log File** - Into this text box, type the full path name of the log file or use the **Browse** button to locate an existing log file. It is possible to share a log file between multiple printers by specifying the same file name in each driver.
- **View Log** button - View the current log file when this button is clicked.
- **Clear Log** button - Erase the current log file when this button is clicked. The next job printed will be the first job in a new log file.

Printer Code Recording - Printer Code Recording allows recording of all of the print code sent to the printer to a file. Unlike using the Print to File option in most applications, Printer Code Recording allows printing to the printer and to a file simultaneously.

- **Record Printer Code** - This check box must be checked to record printer code to the specified directory. Each print job will generate a separate file.
- **Overwrite Files With Same Name** - The driver will name print code files by adding a .PRN extension to the name of the document being printed. Normally, if the file already exists, a unique name is generated by adding a number to the end of the new filename. If this check box is checked, it will cause the driver to overwrite existing files.
- **Directory** - Print code files will be recorded to the directory name entered into this text box or the **Browse** button can be checked to browse for an existing directory.
- **File Listing** - The window on the left of the dialog is a list of the print code files in the current directory, to allow performing operations on individual files using the buttons to the right.

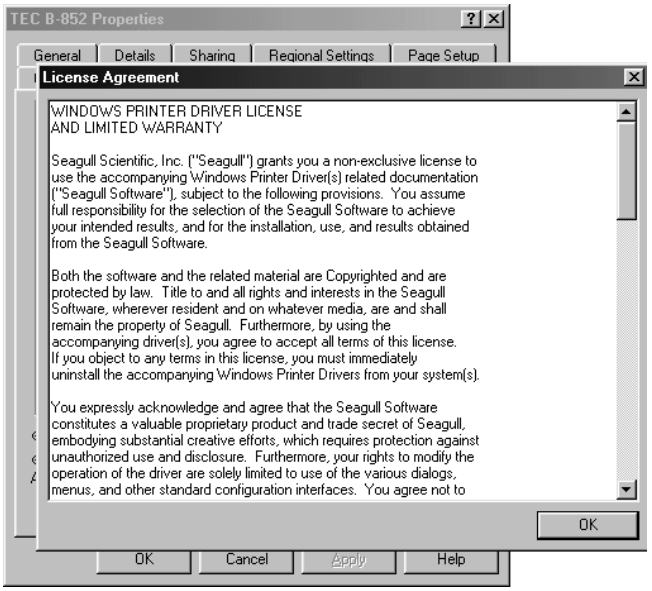
3.4.10 Testing Tab (Cont.)

- **View File** button - View the currently selected print code file in a text editor
- **Send To Printer** button - Sends the currently selected print code file to the printer, effectively printing the job again. If graphics or format caching was enabled, it may be necessary to send each print file in the order it was logged to get the desired results.
- **Delete File** button - Deletes the print code file currently selected in the list.
- **Delete All Files** button - Deletes all print code files in the current directory and clears the list.

3.4.11 About Tab

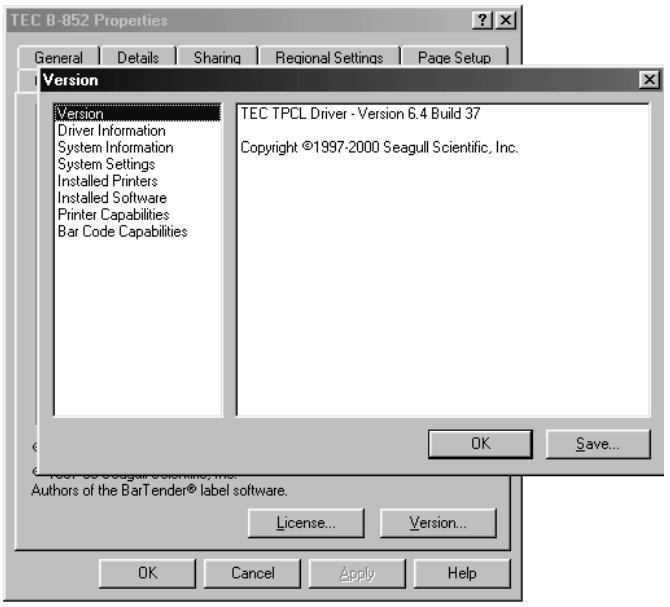
This page will allow checking the driver version information, printer apabilities, system information and also will display the software license greement. Clicking on the **About** tab will cause the following screen isplay to appear.

Clicking on the **License** button in the preceding screen will cause the following screen display to appear.


TEC B-852 Properties
General
Details
Sharing
Regional Settings
Page Setup
License Agreement
WINDOWS PRINTER DRIVER LICENSE
AND LIMITED WARRANTY
Seagull Scientific, Inc. ("Seagull") grants you a non-exclusive license to use the accompanying Windows Printer Driver(s) related documentation ("Seagull Software"), subject to the following provisions. You assume full responsibility for the selection of the Seagull Software to achieve your intended results, and for the installation, use, and results obtained from the Seagull Software.
Both the software and the related material are Copyrighted and are protected by law. Title to and all rights and interests in the Seagull Software, wherever resident and on whatever media, are and shall remain the property of Seagull. Furthermore, by using the accompanying driver(s), you agree to accept all terms of this license. If you object to any terms in this license, you must immediately uninstall the accompanying Windows Printer Drivers from your system(s).
You expressly acknowledge and agree that the Seagull Software constitutes a valuable proprietary product and trade secret of Seagull, embodying substantial creative efforts, which requires protection against unauthorized use and disclosure. Furthermore, your rights to modify the operation of the driver are solely limited to use of the various dialogs, menus, and other standard configuration interfaces. You agree not to
OK
OK
Cancel
Apply
Help

3.4.11 About Tab (Cont.)

Clicking on the **Version** button in the initial screen will cause the following screen to appear.



The screen will show the version number of the driver currently installed into the computer. Clicking on any of the other items in the drop down list will also display information about the following items:

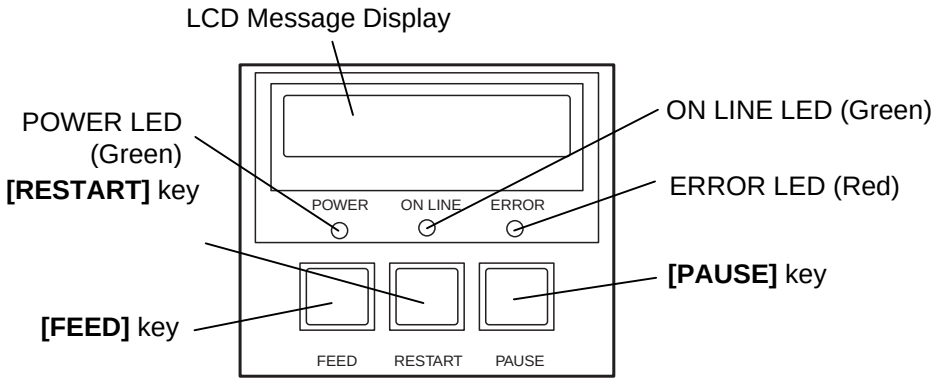
- **Driver Information** – Lists additional data about the current driver.
- **Systems Information** – Lists the Windows and DOS versions installed in the computer and lists the available drives.
- **System Settings** – Lists language selections, CRT screen resolution, and lists the current parameter settings for the serial ports.
- **Installed Printers** – Lists all printers currently installed in this PC and lists the drivers and other information about each.
- **Installed Software** – Lists all the software programs that are currently installed in the PC.
- **Printer Capabilities** – Lists all the capabilities (print width, length, etc.) of this printer.
- **Bar Code Capabilities** – Outputs a list of all bar codes and indicates whether each is supported or not supported by this printer.

4. ON LINE MODE

This chapter describes usage and purpose of the keys on the Operation Panel in On Line Mode.
When the printer is in On Line Mode and connected to a host computer, normal operation of printing images on labels or tags can be accomplished.

4.1 Operation Panel

- The figure below illustrates the Operation Panel and key functions.



The LCD Message Display shows messages in alphanumeric characters and symbols to indicate the printer's status. Up to 16 characters can be displayed on one line.

There are three LED lights on the Operation Panel.

LED	Illuminates when…	Flashes when…
POWER	The printer is turned on.	-----
ON LINE	The printer is ready to print.	The printer is communicating with your computer.
ERROR	Any error occurs with the printer.	-----

NOTE:
*Use the **[RESTART]** key to resume printing after a pause condition, or after clearing an error.*

There are three keys on the Operation Panel.

PAUSE	Used to stop printing temporarily.
RESTART	Used to restart printing.
FEED	Used to feed the media.

4.2 Operation

When the printer is turned on, the "ON LINE" message appears on the LCD message display. It is shown during standby or normal printing.

1. The printer is turned on, standing by, or printing.

```
ON LINE
```

2. If any error occurs during printing, an error message appears. The printer stops printing automatically. (The number on the right column shows the number of unprinted media.)

```
NO PAPER     125
```

3. To clear the error, press the **[RESTART]** key. The printer resumes printing.

```
ON LINE
```

4. If the **[PAUSE]** key is pressed during printing, the printer stops printing temporarily. (The number on the right column shows the number of unprinted media.)

```
PAUSE        52
```

5. When the **[RESTART]** key is pressed, the printer resumes printing.

```
ON LINE
```

4.3 Reset

Reset operation clears the print data sent to the printer from the computer, and returns the printer to an idle condition.

1. The printer is turned on, standing by, or printing.

```
ON LINE
```

2. To stop printing, or clear the data sent from the computer, press the **[PAUSE]** key. The printer stops printing.

```
PAUSE  52
```

3. Press and hold the **[RESTART]** key for 3 seconds or longer.

```
<1>RESET
```

4. Press the **[PAUSE]** key. The data sent from the computer will be cleared, and the printer returns to an idle condition.

```
ON LINE
```

> ***NOTE:***
> *If the **[RESTART]** key is held for less than 3 seconds when the printer is in an error or pause state, the printer restarts printing. However, when a communication error or command error occurs, the printer returns to an idle condition.*

4.4 Dump Mode

In Dump mode, any characters sent from the host computer will be printed. Received characters are expressed in hexadecimal values. This allows the user to verify programming commands and debug the program.
And for other details, please refer to your nearest TOSHIBA TEC service representative.

5. MAINTENANCE

WARNING!

- *Be sure to disconnect the Power Cord before performing maintenance. Failure to do this may cause an electric shock.*
- *To avoid injury, be careful not to pinch or jam your fingers while opening or closing the cover and Print Head Block.*
- *The Print Head may become hot. Do not touch the Print Head.*
- *Do not pour water directly onto the printer.*

This chapter describes how to perform normal maintenance.
To maintain the printer performance and quality print, please clean the printer regularly, or whenever media or ribbon is replaced.

5.1 Cleaning

The following sections describe periodic cleaning of the unit.

5.1.1 Print Head/Platen/ Sensors

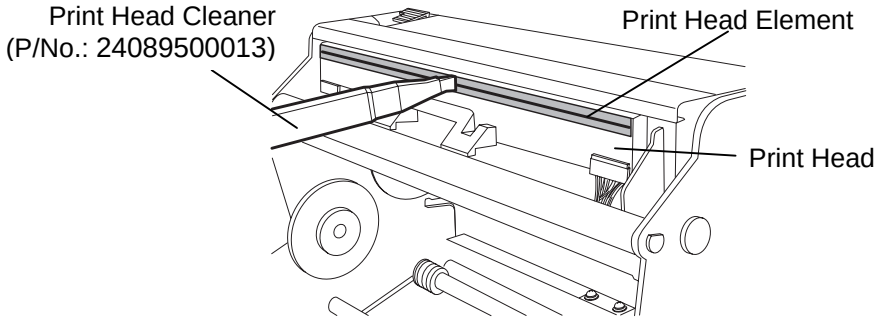
CAUTION!

- *Do not allow any hard objects to touch the print head or platen, as this may cause damage to them.*
- *Do not use any volatile solvent including thinner and benzene, as this may cause discoloration to the cover, print failure, or breakdown of the printer.*
- *Do not touch the print head element with bare hands, as static may damage the print head.*
- *Be sure to use the print head cleaner enclosed with this printer. Failure to do this may shorten the print head life.*

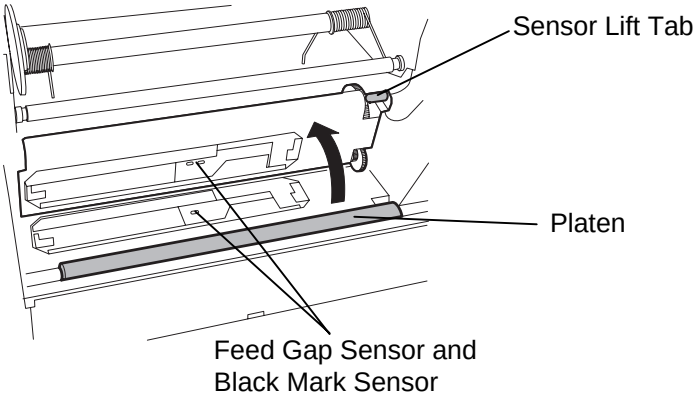
NOTE:

Please use the TEC approved Print Head Cleaner which can be purchased from an authorized TOSHIBA TEC service representative.

1. Turn off the printer. Open the Top Cover.
2. Press the Head Block Release Lever to release the Print Head Block.
3. Raise the Print Head Block and remove the ribbon.
4. Clean the Print Head Element with the supplied Print Head Cleaner.



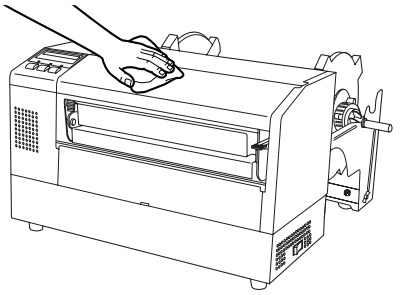
5. Hold the Sensor Lift Tab and lift the Upper Sensor Ass'y.
6. Wipe the Feed Gap Sensor and Black Mark Sensor with a dry soft cloth.
7. Wipe the Platen with a soft cloth slightly moistened with ethyl alcohol.



5.1.2 Covers and Panels

> ***CAUTION!***
>
> *Do not use any volatile solvents including thinner and benzene, as this may cause discoloration or distortion of the cover.*

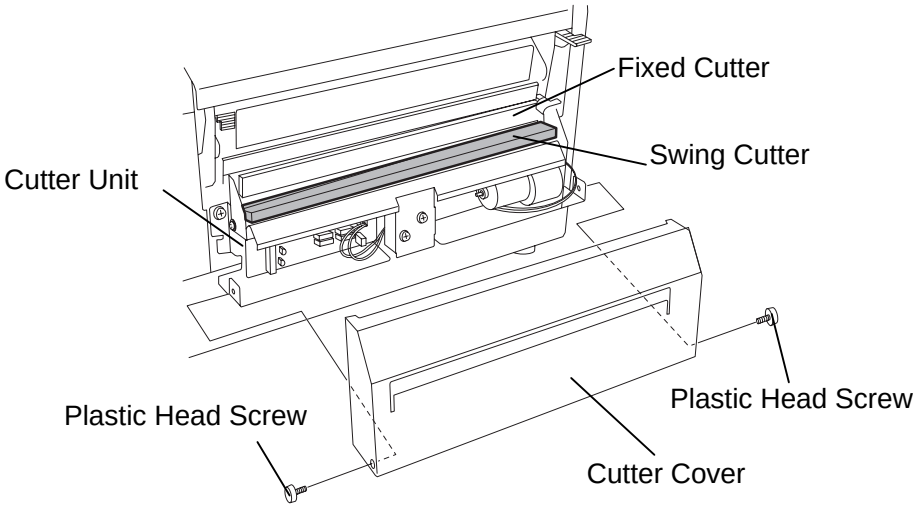
Wipe the Cover and Front Panel with a dry soft cloth. Wipe off dirt with a soft cloth slightly moistened with water.



5.1.3 Optional Cutter Module

> ***WARNING!***
>
> 1. *Be sure to turn the power off before cleaning the Cutter Module.*
> 2. *The Cutter is sharp, so care should be taken not to injure yourself when cleaning.*

1. Remove the Plastic Head Screws and to detach the Cutter Cover.
2. Remove the jammed paper and trash, if any.
3. Clean the Cutter Blade with a dry cloth.



5.2 Care/Handling of the Media and Ribbon

> ***CAUTION!***
>
> *Be sure to carefully review and understand the Supply Manual. Use only media and ribbons which meet specified requirements. Use of non-specified media and ribbons may shorten the head life and result in problems with bar code readability or print quality. All media and ribbons should be handled with care to avoid any damage to the media, ribbons or printer. Read the guideline in this section carefully.*

- Do not store the media and ribbon for longer than the manufacturer's recommended shelf life.
- Store media rolls on the flat end. Do not store them on the curved sides as this might flatten that side causing erratic media advance and poor print quality.
- Store the media in plastic bags and always reseal after opening. Unprotected media can get dirty and the extra abrasion from the dust and dirt particles will shorten the print head life.
- Store the media and ribbon in a cool, dry place. Avoid areas where they would be exposed to direct sunlight, high temperature, high humidity, dust or gas.
- The thermal paper used for direct thermal printing must not have specifications which exceed Na^+ 800 ppm, K^+ 250 ppm and Cl^- 500 ppm.
- Some ink used on pre-printed media may contain ingredients which shorten the print head's product life. Do not use labels pre-printed with ink which contain hard substances such as carbonic calcium ($CaCO_3$) and kaolin (Al_2O_3, $2SiO_2$, $2H_2O$).

For further information, please contact your local distributor or your media and ribbon manufacturers.

6. TROUBLESHOOTING

This chapter lists the error messages, possible problems, and their solutions.

WARNING!
If a problem cannot be solved by taking actions described in this chapter, do not attempt to repair the printer. Turn off and unplug the printer. Then contact an authorized TOSHIBA TEC service representative for assistance.

6.1 Error Messages

NOTES:

- *If an error is not cleared by pressing the **[RESTART]** key, turn the printer off and then on.*
- *After the printer is turned off, all print data in the printer is cleared.*
- *"****" indicates the number of unprinted media. Up to 9999 (in pieces).*

Error Messages	Problems/Causes	Solutions
HEAD OPEN	The print head block is opened in Online Mode.	Close the print head block. Then press the **[RESTART]** key.
HEAD OPEN ****	Feed or printing has been attempted with the Print Head Block open.	Close the print head block. Then press the **[RESTART]** key.
COMMS ERROR	A communication error has occurred.	Make sure the interface cable is firmly connected to the computer, and the computer is turned on.
PAPER JAM ****	1. The media is jammed at the media path. The media is not fed smoothly. 2. A wrong media sensor is selected for the media being loaded. 3. The Black Mark Sensor is not aligned to the Black Mark on the media. 4. Size of the loaded media is not consistent with the programmed size. 5. The Feed Gap Sensor cannot distinguish the print area from a label gap.	1. Remove the jammed media, and clean the platen. Then reload the media properly. Finally press the **[RESTART]** key. 2. Turn the printer off and then on. Then select the media sensor supporting the media being loaded. Finally resend the print job. 3. Adjust the sensor position. Then press the **[RESTART]** key. 4. Turn the printer off and then on. Replace the loaded media with one which matches the programmed size, or select a programmed size that matches the loaded media. Finally resend the print job. 5. Refer to Section 6.5 to set the threshold. If this does not solve the problem, turn off the printer, and call an authorized service representative.
CUTTER ERROR **** (Only when the Cutter Module is installed on the printer.)	1. The media is jammed in the Cutter. 2. The Cutter Cover is improperly installed.	1. Remove the jammed media. Then press the **[RESTART]** key. If this does not solve the problem, turn off the printer, and call an authorized service representative. 2. Turn the printer off and check the status of the Cutter Cover.

6.1 Error Messages (Cont.)

Error Messages	Problems/Cause	Solutions
NO PAPER ****	1. The media has run out. 2. The media is not loaded properly. 3. The media is slack.	1. Load new media. Then press the **[RESTART]** key. 2. Load the media properly. Then press the **[RESTART]** key. 3. Take up any slack in the media.
RIBBON ERROR ******	1. The ribbon is not fed properly. 2. The ribbon has run out.	1. Remove the ribbon, and check the status of the ribbon. Replace the ribbon, if necessary. If the problem is not solved, turn off the printer, and call an authorized service representative. 2. Load a new ribbon. Then press the **[RESTART]** key.
EXCESS HEAD TEMP	The print head is overheated.	Turn off the printer, and allow it to cool down (about 3 minutes). If this does not solve the problem, call a TOSHIBA TEC authorized service representative.
HEAD ERROR	There is a problem with the Print Head.	Replace the Print Head. Then press the **[RESTART]** key.
Other error messages	Hardware or software problems may have occurred.	Turn the printer off and then on. If this does not solve the problem, turn off the printer again, and call a TOSHIBA TEC authorized service representative.

6.2 Possible Problems

This section describes problems that may occur when using the printer, and their causes and solutions.

Possible Problems	Causes	Solutions
The printer will not turn on.	1. The Power Cord is disconnected. 2. The AC outlet is not functioning correctly. 3. The fuse has blown, or the circuit breaker has tripped.	1. Plug in the Power Cord. 2. Make sure that the power is supplied using another electric appliance. 3. Check the fuse or breaker.
The media is not fed.	1. The media is not loaded properly. 2. The printer is in an error condition.	1. Load the media properly. 2. Solve the error in the Message Display. (See Section 6.1 for more detail.)
Nothing is printed on the media.	1. The media is not loaded properly. 2. The ribbon is not loaded properly. 3. A print head is not installed properly. 4. The ribbon and media are not matched.	1. Load the media properly. 2. Load the ribbon properly. 3. Install the Print Head properly. Close the Print Head Block. 4. Select an appropriate ribbon for the media type being used.
The printed image is blurred.	1. The ribbon and media are not matched. 2. The Print Head is not clean.	1. Select an appropriate ribbon for the media type being used. 2. Clean the print head using the supplied Print Head Cleaner.
The Cutter does not cut.	1. The media is jammed in the Cutter. 2. The Cutter Blade is dirty.	1. Remove the jammed paper. 2. Clean the Cutter Blade.

6.3 Removing Jammed Media

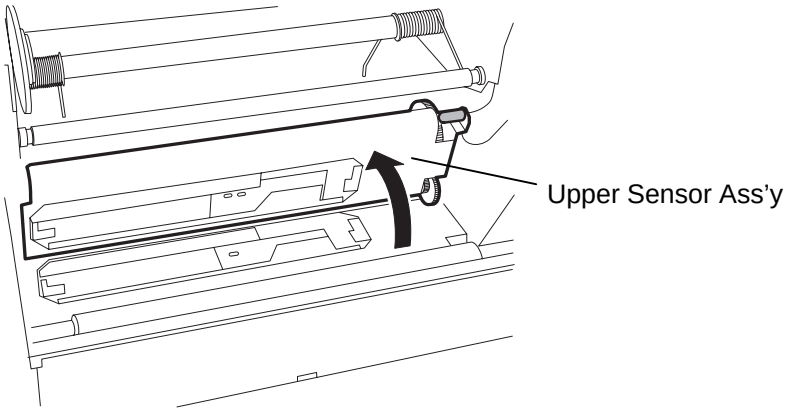
This section describes in detail how to remove jammed media from the printer.

> ***CAUTION!***
>
> *Do not scratch the Print Head or Platen using a sharp instrument, as this may cause media feed failure or damage to the printer.*

> ***NOTE:***
>
> *If you get frequent jams in the Cutter, contact a TOSHIBA TEC authorized service representative.*

Remove the jammed media from under the Upper Sensor Ass'y as follows:

1. Open the Top Cover.
2. Push the Head Block Release Lever to release and raise the Print Head Block.
3. Lift the Upper Sensor Ass'y, and remove the jammed media.



4. Clean the Platen and sensors as described in Section 5.1.1 .
5. Media jams in the Cutter Module can be caused by conditions such as wear or residual glue from label stock on the Cutter Blade. Do not use non-specified media with the Cutter.

6.4 Threshold Setting

NOTES:

1. *If the* **[PAUSE]** *key is released within 3 seconds while in pause state, paper will not feed.*
2. *Failure to feed more than 1.5 labels may result in an incorrect threshold setting.*
3. *While the Print Head Block is raised, the* **[PAUSE]** *key does not work.*
4. *Errors such as paper end and cutter error are not detected during paper feed.*
5. *Selecting the Transmissive Sensor(for pre-printed labels) within software commands allows the printer to detect the proper print start position correctly even when using pre-printed labels.*
6. *If using the transmissive sensor and the printer continues to print out of position even after setting the threshold, adjust the Feed Gap Sensor in the system mode. Reset the threshold again. Make sure that the Transmissive Sensor (for pre-printed labels) is selected in the feed and issue commands.*

To maintain a constant print position the printer uses the Transmissive Sensor to detect the gap between labels by measuring the amount of light passing through the media. When the media is pre-printed, the darker (or more dense) inks can interfere with this process causing paper jam errors. To get around this problem a minimum threshold can be set for the sensor in the following way.

■ **Threshold setting procedure**

1. Turn the power ON. The printer is in stand by mode.

```
ON LINE
```

2. Load a media roll.
3. Press the **[PAUSE]** key.

```
PAUSE
```

4. The printer enters the pause mode.
5. Press and hold the **[PAUSE]** key for at least 3 seconds in the pause state.

```
TRANSMISSIVE
```

6. The sensor type is displayed.

7. To select the Reflective Sensor (Black Mark Sensor), press the **[FEED]** key.

```
REFLECTIVE
```

8. To select the Transmissive Sensor (Feed Gap Sensor), press the **[FEED]** key again.

```
TRANSMISSIVE
```

9. Press and hold the **[PAUSE]** key until more than 1.5 labels (tags) have been advanced.
The media is advanced until the **[PAUSE]** key is released.
(Threshold setting is completed by this operation.)

```
PAUSE
```

10. Press the **[RESTART]** key.

```
ON LINE
```

11. The printer is in stand-by.

12. Send an issue command from the PC to the printer.

```
ON LINE
```

APPENDIX 1 SPECIFICATIONS

Appendix 1 describes the printer specifications and supplies for use on the B-852 printer.

A1.1 Printer

The following is the printer specifications.

Item \ Model	B-852-TS12-QQ
Supply voltage	AC100 – 120V, 60 Hz
Power consumption	2.5 A, 232 W maximum during a print job 0.16 A, 15 W maximum during standby
Operating temperature range	40°F to 104°F (5°C to 40°C)
Relative humidity	25% to 85% RH (no condensation)
Resolution	300 dpi (11.8 dots/mm)
Printing method	Thermal transfer or Thermal direct
Printing speed	2 inches/sec. (50.8 mm/sec.) 4 inches/sec. (101.6 mm/sec.)
Available media width (including backing paper)	3.9 inches to 9.5 inches (100 mm to 242 mm)
Effective print width (max.)	8.5” (216.8 mm)
Issue mode	Batch Cut (Cut mode is enabled only when the optional cutter module is installed.)
LCD Message display	16 characters/line
Dimension (W × D × H)	15.2” × 7.1”* × 9.6” (385 mm × 181 mm* × 243 mm) *: Depth is 16.8” (427 mm) when the supply holder is installed.
Weight	34.4 lb (15.6 kg) (Media and ribbon are not included.)
Available bar code types	JAN8, JAN13, EAN8, EAN8+2 digits, EAN8+5 digits, EAN13, EAN13+2 digits, EAN13+5 digits UPC-E, UPC-E+2 digits, UPC-E+5 digits, UPC-A, UPC-A+2 digits, UPC-A+5 digits MSI, ITF, NW-7, CODE39, CODE93, CODE128 EAN128, Industrial 2 to 5, Customer Bar Code, POSTNET, KIX CODE, RM4SCC (ROYAL MAIL 4STATE CUSTOMER CODE)
Available two-dimensional code	Data Matrix, PDF417, QR code, Maxi Code, Micro PDF417
Available bar font	Times Roman (6 sizes), Helvetica (6 sizes), Presentation (1 size), Letter Gothic (1 size), Prestige Elite (2 sizes), Courier (2 sizes), OCR (2 types), Outline font (4 types), Price font (3 types)
Rotations	0°, 90°, 180°, 270°
Standard interface	Serial interface (RS-232C) Parallel interface (Centronics)
Optional interfaces	PCL5 interface (B-7708-PCL-QM) PCMCIA interface (B-7708-PC-QM) Expansion I/O interface (B-8700-IO-QM)

NOTES:

- *Data Matrix™ is a trademark of International Data Matrix Inc., U.S.*
- *PDF417™ is a trademark of Symbol Technologies Inc., US.*
- *QR Code is a trademark of DENSO CORPORATION.*
- *Maxi Code is a trademark of United Parcel Service of America, Inc., U.S.*

A1.2 Options

Option Name	Type	Description	Source
Cutter module	B-7208-QM	A stop and cut swing cutter.	See NOTE.
PCL5 interface board	B-7708-PCL-QM	This board enables the B-852 printer to support the HP-PCL5.	See NOTE.
Expansion I/O interface board	B-8700-IO-QM	Installing this board in the printer will allow a connection with an external device with the exclusive interface, such as the keyboard module.	See NOTE.
Keyboard module	KB-80-QM	This module is an external intelligent keyboard unit, including a 16 digit by 2 line LCD and 28 key switches.	See NOTE.
PCMCIA interface board	B-7708-PC-QM	This board enables the use of the following PCMCIA cards: LAN card: 3 COM EtherLink® III (recommended) ATA card: Conforming to PC card ATA standard Flash memory card: 4MB card (See page 2-14.)	See NOTE.

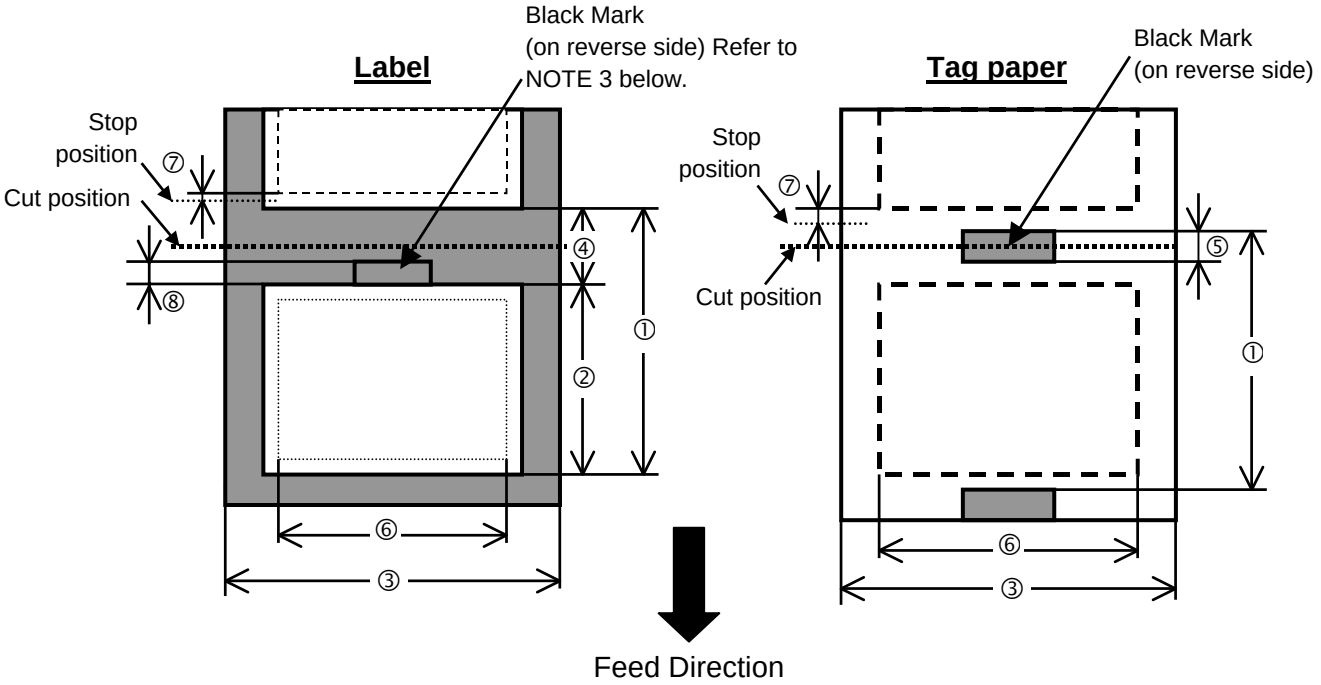
NOTE:
Available from your nearest TOSHIBA TEC representative or TOSHIBA TEC Head Quarters.

A1.3 Media

Please make sure that the media that will be used is approved by TOSHIBA TEC. The warranty does not apply when a problem is caused by using media that is not approved by TOSHIBA TEC.
For information regarding TOSHIBA TEC-approved media, please contact a TOSHIBA TEC authorized service representative.

A1.3.1 Media Type

Two types of media can be loaded for this thermal transfer/direct thermal printer-label or tag. The table below shows size and shape of the media available for this printer.



A1.3.1 Media Type (Cont.)

[Unit: mm]

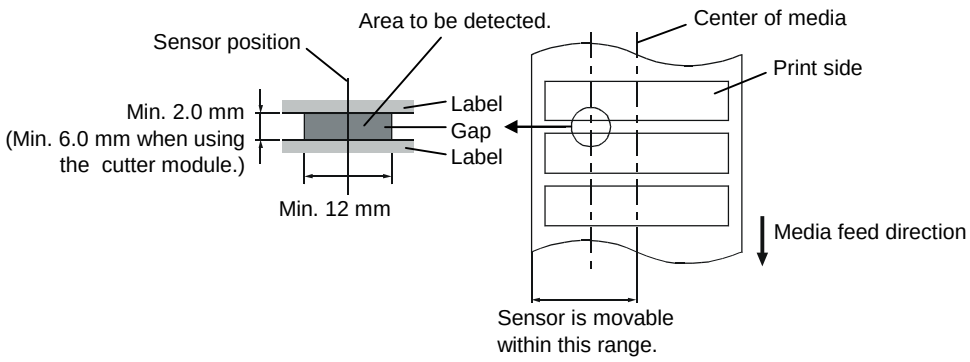
Item \ Label dispensing mode		Batch mode	Cut mode
① Minimum media pitch		15.0	Label: 38.0
			Tag: 25.4
② Label length		Min. 12.5	Min. 32.0
③ Width including backing paper		100.0- 242.0	100.0 – 235.0
④ Gap length		2.5 – 20.0	6.0 – 20.0
⑤ Black mark length (Tag paper)		2.0 – 10.0	
⑥ Effective print width		216.8±0.2	
⑦ Print speed up/slow down area		1.0	
⑧ Black mark length (Label)		2.0 – 20.0	6.0 – 20.0
Max. print length		640.0	
Maximum effective length for on the fly issue		320.0	
Max. outer roll diameter		ϕ230	
Thickness	Label + backing paper	0.13 – 0.18	
	Tag	0.08 – 0.18	

NOTES:

1. *To ensure print quality and print head life use only TOSHIBA TEC specified media.*
2. *When using the cutter ensure that label length ② plus inter-label gap length ④ exceeds 38 mm. (i.e. label pitch should be greater than 38 mm.)*
3. *When requesting black marks on label rolls, the following requirements must be satisfied.*
   When the gap length is less than 4 mm:
   The black mark length should be longer than the gap length.
   When the gap length is 4 mm or more:
   The black mark should not overlap the gap for more than 4 mm or the following label.
   Black marks should be printed on reverse side of the gaps. Also, they should contact or overlap the preceding label's bottom end line.
4. *"On the fly issue" means that the printer can feed and print without stopping between labels.*

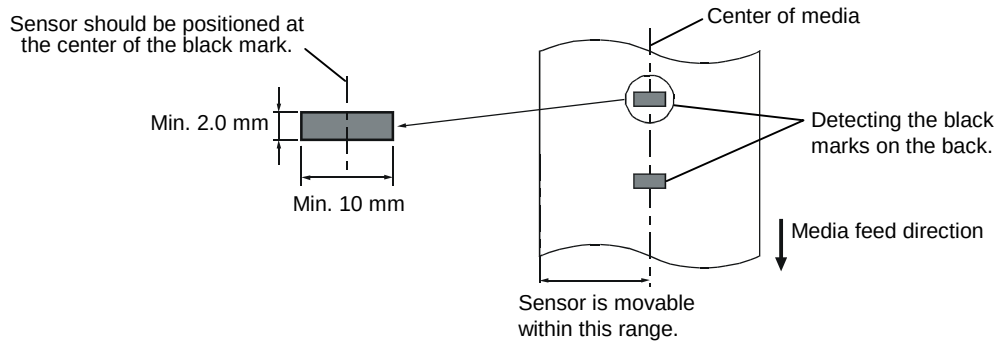
A1.3.2 Detection Area of the Transmissive Sensor

The transmissive sensor is movable from the center to the left edge of media.
The transmissive sensor detects a gap between labels, as illustrated below.



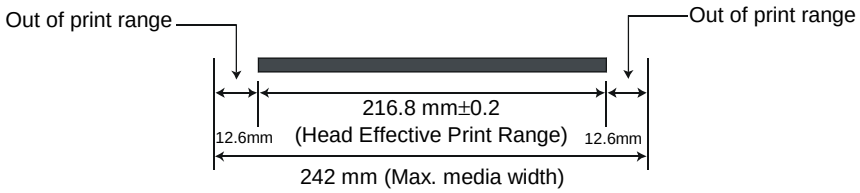
A1.3.3 Detection Area of the Reflective Sensor

The reflective sensor is movable from the center to the left edge of media.
The reflection factor of the black mark must be 10% or lower with a waveform length of 950 nm.
The reflective sensor should be aligned with the center of the black mark.

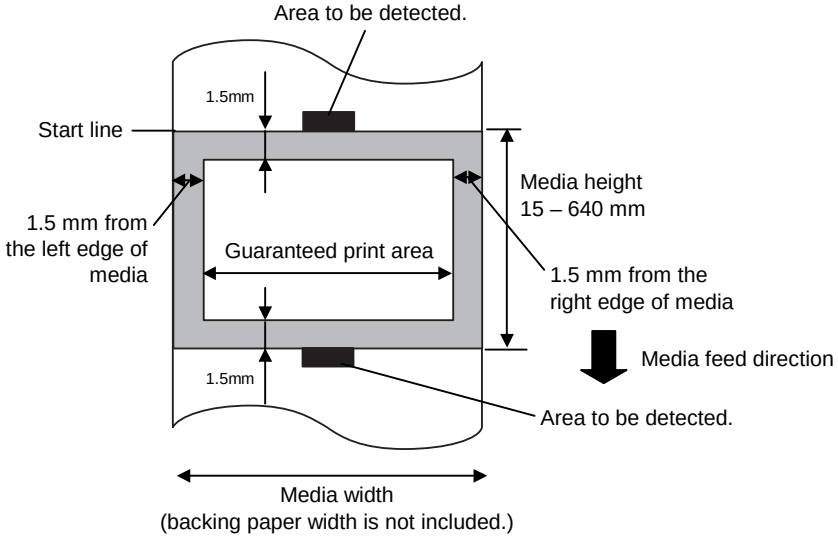

Sensor should be positioned at the center of the black mark.
Center of media
Min. 2.0 mm
Min. 10 mm
Detecting the black marks on the back.
Media feed direction
Sensor is movable within this range.

A1.3.4 Effective Print Area

The figure below illustrates the relation between the head effective print width and media width.



The figure below shows the effective print area on the media.



NOTES:

1. *Be sure not to print on the 1.5-mm wide area from the media edges (shaded area in the above figure).*
2. *The center of media is positioned at the center of the print heads.*

A1.4 Ribbon

Please make sure that the ribbon being used is approved by TOSHIBA TEC. The warranty does not apply to any problem caused by using non-approved ribbons.
For information regarding TOSHIBA TEC approved ribbon, please contact a sales representative.

Type	Spool type
Width	120 – 220 mm Recommended width is 120, 160 and 220 mm.
Length	300 m
Outside Diameter	ϕ72 mm (max.)

The table below shows the correlation between ribbon width and media width (backing paper is not included).

Ribbon width	Media width
120 mm	100 – 110 mm
160 mm	110 – 150 mm
220 mm	150 – 242 mm

NOTES:

1. *To ensure print quality and print head life use only TOSHIBA TEC specified ribbons.*
2. *To avoid ribbon wrinkles use a ribbon which is wider than the media by 10 mm or more. However, too much difference in width between the two may cause wrinkles.*

APPENDIX 2 MESSAGES AND LEDS

Appendix 4 describes the LCD messages displayed on the operation panel.

Symbols in the message

1: ❍: The LED is illuminated. ⊙: The LED is flashing. ●: The LED is unlit.
2: ****: the number of unprinted media. Up to 9999 (in pieces)
3: %%%%%%%%: ATA Card's remaining memory 0 to 9999999 (in K bytes)
4: ###: Flash memory card remaining memory for PC save area: 0 to 895 (in K bytes)
5: &&&&: Remaining flash memory capacity for storing writable characters 0 to 3147 (in K bytes)

No.	LCD Message	LED Indication			Printer Status	Restoration by RESTART key Yes/No	Acceptance of Status Request Reset Command Yes/No
		POWER	ONLINE	ERROR			
1	ON LINE	❍	❍	●	In online mode	-----	Yes
	ON LINE	❍	⊙	●	In online mode (The printer in communication)	-----	Yes
2	HEAD OPEN	❍	●	●	The print head block is opened in online mode.	-----	Yes
3	PAUSE ****	❍	●	●	The printer is paused.	Yes	Yes
4	COMMS ERROR	❍	●	❍	A parity, overrun, or framing error has occurred during communication through the RS-232C.	Yes	Yes
5	PAPER JAM ****	❍	●	❍	The media is jammed during paper feed.	Yes	Yes
6	CUTTER ERROR****	❍	●	❍	A problem has occurred with the cutter module.	Yes	Yes
7	NO PAPER ****	❍	●	❍	The media has run out, or the media is not loaded on the supply holder properly.	Yes	Yes
8	RIBBON ERROR****	❍	●	❍	The ribbon has run out, or has been torn. A problem has occurred with the sensor that determines the torque for the ribbon motor.	Yes	Yes
9	HEAD OPEN ****	❍	●	❍	Feed or printing was attempted with the print head block open.	Yes	Yes
10	EXCESS HEAD TEMP	❍	●	❍	The print head is overheated.	No	Yes
11	SAVING%%%%%%%% or SAVING ###&&&&	❍	❍	●	In writable character or PC command save mode	-----	Yes
12	FLASH WRITE ERR.	❍	●	❍	An error has occurred while writing to flash memory or ATA card.	No	Yes
13	FORMAT ERROR	❍	●	❍	An erase error has occurred in formatting the flash memory or ATA card.	No	Yes
14	FLASH CRD FULL	❍	●	❍	Data cannot be stored because the flash memory or ATA card is full.	No	Yes
15	HEAD ERROR	❍	●	❍	There is a problem with the print head.	Yes	Yes
16	Display of error message (See Notes.)	❍	●	❍	A command error has occurred in analyzing the command.	Yes	Yes

NOTES:

- *If a command error is found in the command received, 16 bytes of the command error, starting from the command code, will be displayed. (However, [LF] and [NUL] will not be displayed.)*

Example 1

[ESC] T20 E30 [LF] [NUL]

Command error

The following message appears.

```
T20E30
```

Example 2

[ESC] XR; 0200, 0300, 0450, 1200, 1, [LF] [NUL]

Command error

The following message appears.

```
XR;0200,0300,045
```

Example 3

[ESC] PC001; 0A00, 0300, 2, 2, A, 00, B [LF] [NUL]

Command error

The following message appears.

```
PC001;0A00,0300,
```

- *When the error command is shown, "? (3FH)" appears for codes other than codes 20H to 7FH and A0H to DFH.*

APPENDIX 3 INTERFACE

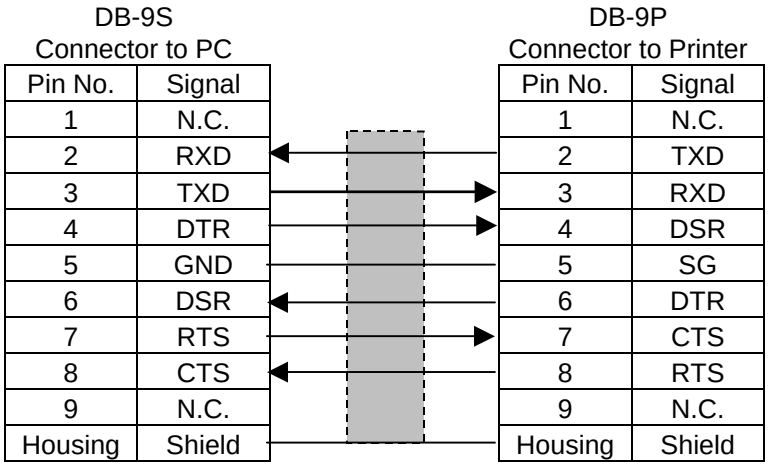
■ Interface Cables

To prevent radiation and reception of electrical noise, the interface cables must meet the following requirements:

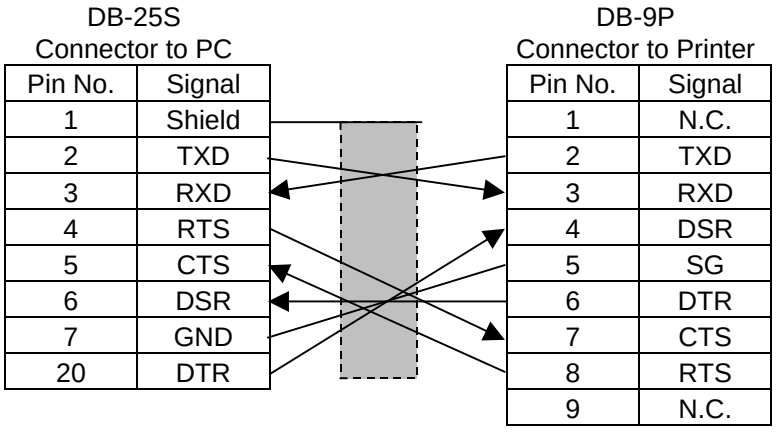
- Fully shielded and fitted with metal or metallized connector housings.
- Keep as short as possible.
- Should not be bundled tightly with power cords.
- Should not be tied to power line conduits.

■ RS-232C Cable description

The serial data cable used to connect the printer to the host computer should be one of the following two types:



DB-9S Connector to PC		DB-9P Connector to Printer	
Pin No.	Signal	Pin No.	Signal
1	N.C.	1	N.C.
2	RXD	2	TXD
3	TXD	3	RXD
4	DTR	4	DSR
5	GND	5	SG
6	DSR	6	DTR
7	RTS	7	CTS
8	CTS	8	RTS
9	N.C.	9	N.C.
Housing	Shield	Housing	Shield



DB-25S Connector to PC		DB-9P Connector to Printer	
Pin No.	Signal	Pin No.	Signal
1	Shield	1	N.C.
2	TXD	2	TXD
3	RXD	3	RXD
4	RTS	4	DSR
5	CTS	5	SG
6	DSR	6	DTR
7	GND	7	CTS
20	DTR	8	RTS
		9	N.C.

NOTE:
Use an RS-232C cable with inch type securing screws on the connector.

APPENDIX 4 SYSTEM MODE

> ***IMPORTANT!***
>
> *If System Mode is needed for any other purposes, please contact a TOSHIBA TEC authorized service representative before performing any operation in System Mode.*

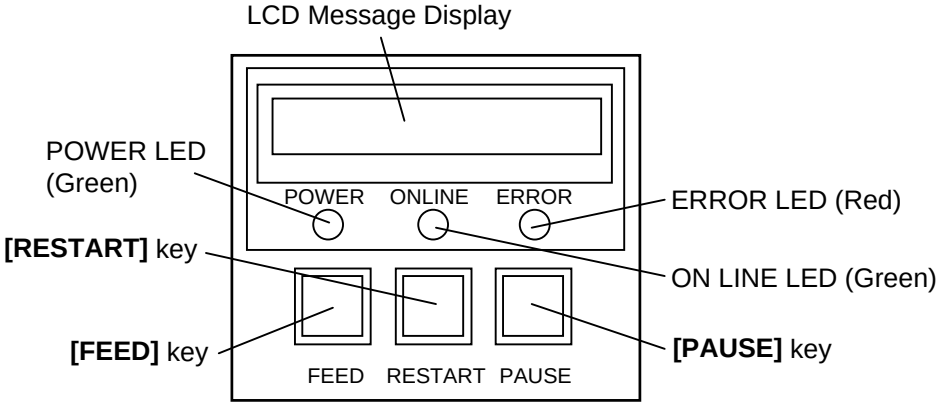
Appendix 4 describes usage and purpose of the keys on the Operation Panel in System Mode.

For end users, System Mode should be used for the following four purposes:

- To check and print the system status, the Maintenance Counter, and the Print Head Element.
- To make fine adjustment related to the media issue.
- To perform a test print for checking print quality.
- To set the parameters for the PCL Emulation.

A4.1 Operation Panel

The figure below illustrates the Operation Panel and key functions.



The LCD Message Display shows messages in alphanumeric characters and symbols to indicate the printer's status. Up to 16 characters can be displayed on one line.

There are three LEDs on the Operation Panel.

LED	Illuminates when…
POWER	The printer is turned on.
ON LINE	The printer is ready to print.
ERROR	Any error occurs with the printer.

In System Mode, the **[FEED], [RESTART]** and **[PAUSE]** keys function as described below.

FEED	Used to start the system mode as a **[RESTART]** key does. Used to select the parameter mode or to fine adjust the parameters in the negative direction (-).
RESTART	Used to select the parameter mode or to fine adjust the parameters in the positive direction (+).
PAUSE	Used to start the system mode as a **[FEED]** key does. Used to select the parameter mode. Used as an enter key.

> ***NOTE:***
>
> *Use the **[RESTART]** key to resume printing after a pause condition, or after clearing an error.*

A4.2 Overview

IMPORTANT!

If the power is turn ON while pressing and holding the ***[FEED]*** *and* ***[PAUSE]*** *keys at the same time, the printer will enter the System Mode intended for Service Personnel.*
In addition to the menus shown in the chart on the right, the following menus are also displayed in the System Mode for Service Personnel:
<2>PARAMETER SET
<5>SENSOR ADJ.
<6>RAM CLEAR
<7>IP ADDRESS

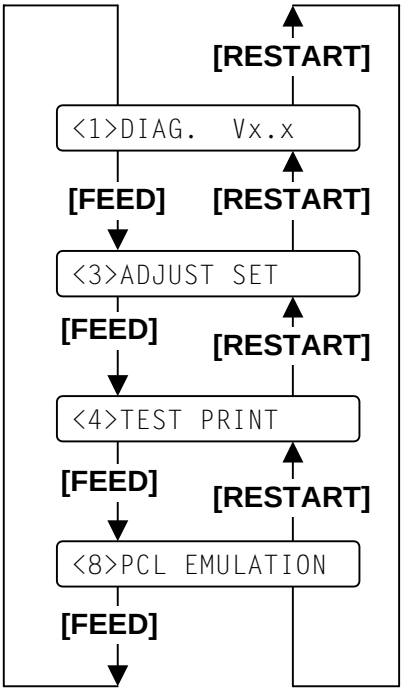
Please do not change the parameter settings for these items, as doing so may cause the printer to malfunction. If you should accidentally enter the System Mode for Service Personnel, just turn the power off. If you should change the settings by accident and the printer malfunctions, please contact your nearest TOSHIBA TEC service representative.

NOTE:

- *System Mode menus can be selected with the* ***[RESTART]*** *or* ***[FEED]*** *key.*
- *Pressing the* ***[PAUSE]*** *key allows you to enter the sub menus of each System Mode menu. Flowcharts of each menu's sub menus are provided on the following pages.*

System Mode consists of four main menus: Self-Diagnostic Test, Printer Parameter Fine Adjustment, Test Print and PCL Emulation Setting.

While pressing the **[FEED]** and **[PAUSE]** keys at the same time, turn onon the printer. Hold both keys until "<1>DIAG. Vx.x" message appears on the display.



This is the start of the Self-Diagnostic Test menu.

This is the start of the Printer Parameter Fine Adjustment menu.

This is the start of the Test Print menu.

This is the start of the PCL Emulation menu.

A4.3 Self-Diagnostic Test

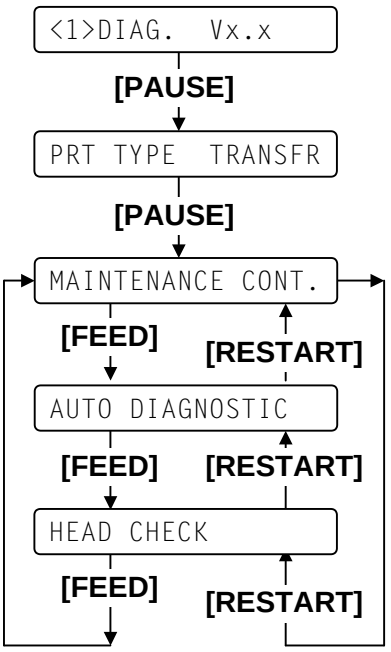
Outline of Self-Diagnostic Test

In the Self-Diagnostic Test mode, ,the printer checks and prints out the printer system information such as the sensor or interface, and the Maintenance Counter. It also performs the print head broken element check.

NOTE:

*Use the **[FEED]** or **[RESTART]** key to select a desired option.*

The **Self-Diagnostic Test** contains the following sub menus:



Selection of the printing mode.

Prints out the Maintenance Counter /Parameter Settings.

Performs a Self-Diagnostic Test, and prints out the result.

Checks to see if there is any problem with the print head.

While pressing the **[FEED]** and **[PAUSE]** keys at the same time, turn on the printer. Hold both keys until the "<1>DIAG." Message appears in the display.

<1>DIAG. Vx.x

NOTE:

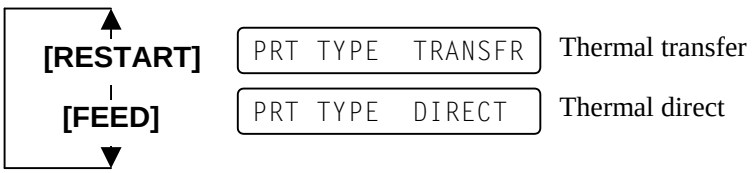
"x.x" of "DIAG. Vx.x" indicates firmware version and . . .

Printing mode selection

NOTE:

When using the ribbon, be sure to select "Thermal Transfer". When using thermal media, be sure to select "Thermal Direct".

Press the **[PAUSE]** key. The type of printing mode can be selected: "TRANSFR" (Thermal transfer) or "DIRECT" (Thermal direct). After selecting the printing mode to be used, press the **[PAUSE]** key.



Maintenance counter/parameter settings print out

NOTE:

See Section A4.7.1 for the Maintenance Counter/Parameter Settings print sample and detailed descriptions for each.

The printer is ready to print out the Maintenance Counter/Parameter Settings. Press the **[PAUSE]** key to start.

MAINTENANCE CONT

The printer starts printing out the Maintenance Counter/Parameter Settings.

CHECKING & PRINT

After printing is completed, the display returns to "<1>DIAG. Vx.x".

A4.3 Self-Diagnostic Test (Cont.)

NOTES:
- *If an error occurs, an error message appears, and the printer stops printing. After clearing the error, press the* ***[PAUSE]*** *key to return to "<1>DIAG.". The printer does not resume printing automatically.*
- *See Section A4.7.2 for Self-Diagnostic Test Print sample with detailed descriptions.*

NOTES:
- *Make sure that the Top Cover is closed before starting the print head check.*
- *If "HEAD ERROR" appears, then print head elements may be damaged. To substain high quality printing, please contact your nearest TOSHIBA TEC service representative for the print head replacement.*
- *The print head element check can be performed at the power on time. For selecting this function, refer to Section A4.4 Parameter Setting.*

Self-Diagnostic Test and the result print out

When the Maintenance Counter/Parameter Settings is printed, the message returns to "<1>DIAG. Vx.x". Press the **[PAUSE]** key twice.

The Self-Diagnostic Test is ready. Press the **[PAUSE]** key to start.

```
AUTO DIAGNOSTIC
```

The printer starts the Self-Diagnostic Test, and prints out the result.

```
CHECKING & PRINT
```

After printing is completed, the display returns to "<1>DIAG. Vx.x".

Print head element check

When the Self-Diagnostic Test result is printed, the message returns to "<1>DIAG. Vx.x". Press the **[PAUSE]** key twice and **[FEED]** key twice.

The printer is ready to check the print head to see if there is any problem with the print head. Press the **[PAUSE]** key to start.

```
HEAD CHECK
```

The printer starts checking the print head.

```
CHECKING
```

If there is no problem with the print head, the print head check is complete. Press the **[PAUSE]** key to return to "<1>DIAG. Vx.x".

```
NORMAL END
```

If there is a problem with the print head, the following message is displayed.

```
HEAD ERROR
```

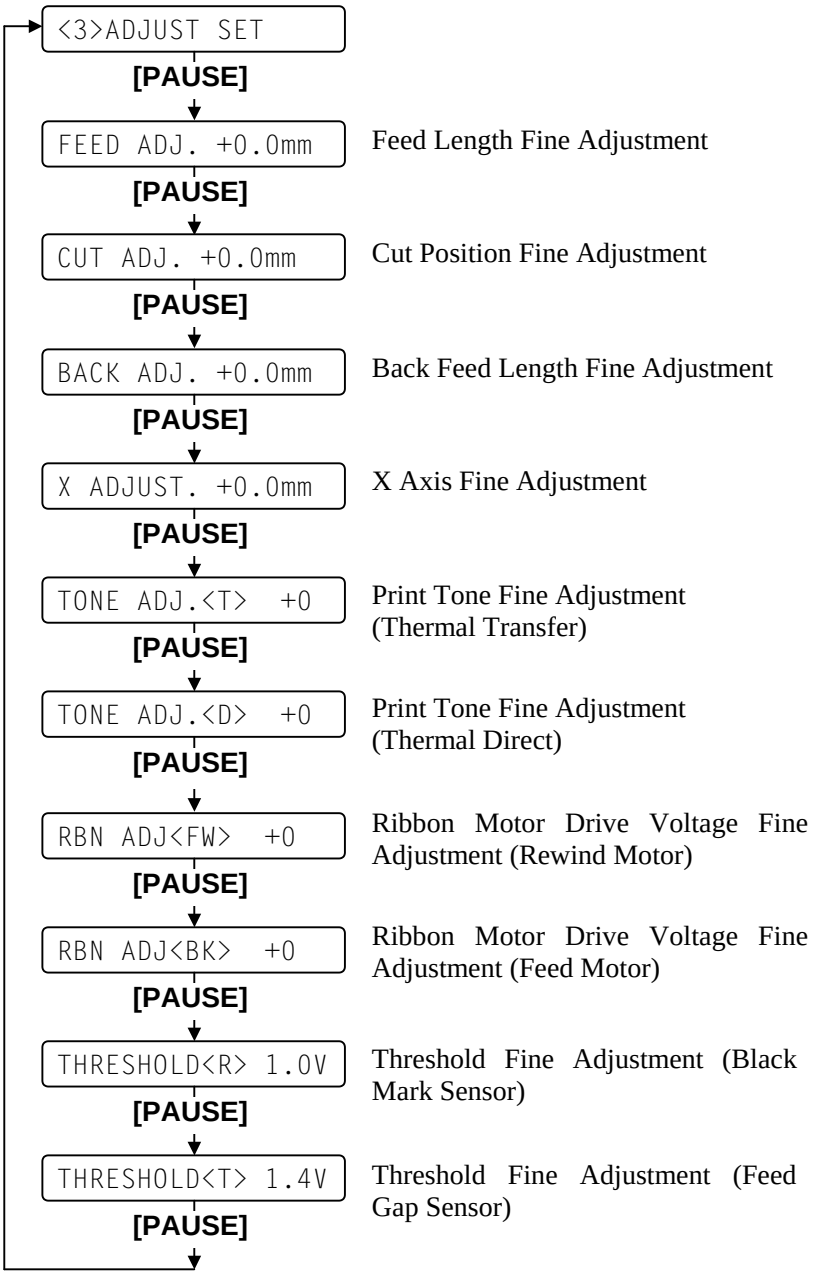
Press the **[PAUSE]** key to return to "<1>DIAG. Vx.x".

A4.4 Printer Parameter Fine Adjustment

Outline of Printer Parameter Fine Adjustment

In the Printer Parameter Fine Adjustment mode, Fine adjustments can be performed for each parameter, such as Print tone, Print start position, Threshold, etc. which are set by the PC command. This is useful when using several types of media in rotation or when the print start position or cut position requires fine adjustments.

The **Printer Parameter Fine Adjustment** menu contains the following.

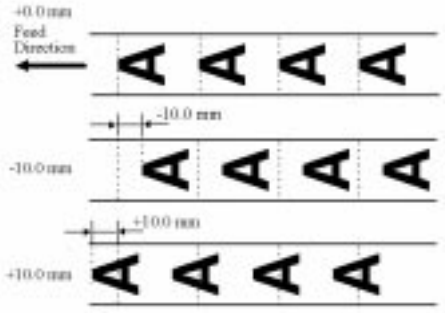


A4.4 Printer Parameter Fine Adjustment (Cont.)

NOTES:

- *When pressing the **[FEED]** and **[RESTART]** keys at the same time in the parameter setting, the message returns to "<3>ADJUST SET".*
- *If holding the **[FEED]** or **[RESTART]** key for 0.5 seconds or longer in the Printer Parameter Fine Adjustment, the key is entered continuously.*
- *A changed parameter becomes enabled by pressing the **[PAUSE]** key and is stored in memory until the printer is turned off.*
- *Use the **[FEED]** or **[RESTART]** key to select a desired value or option.*

Feed Length Fine Adjustment (Example)



NOTE:

The fine adjustment value equals the sum of the fine adjustment values set by the PC command and this parameter. The maximum feed length fine adjustment value is ±50.0mm. When the value reaches the maximum, the value remains unchanged even if the subsequent fine adjustment is performed.

While pressing the **[FEED]** and **[PAUSE]** keys at the same time, turn on the printer. Holder both keys until the "<1>DIAG. Vx.x" Message appears.

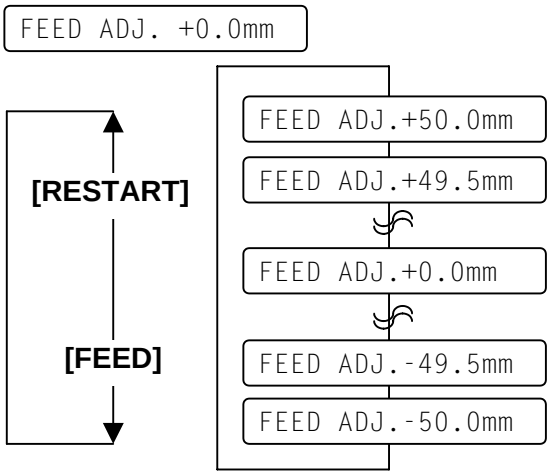
```
<1>DIAG.   Vx.x
```

Press the **[FEED]** key.
The printer is at the start of the Printer Parameter Fine Adjustment menu.

```
<3>ADJUST SET
```

Feed Length Fine Adjustment

With this parameter you can fine adjust the feed length. When "<3>ADJUST SET" appears, press the **[PAUSE]** key.

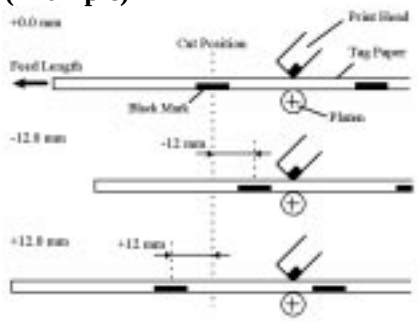


[FEED] key: Pressing the **[FEED]** key one time causes a –0.5mm change, up to –50.0 mm.
[RESTART] key: Pressing the **[RESTART]** key one time causes a +0.5mm change, up to +50.0 mm.

After completing the fine adjustment, press the **[PAUSE]** key.

A4.4 Printer Parameter Fine Adjustment (Cont.)

Cut Position Fine Adjustment
(Example)

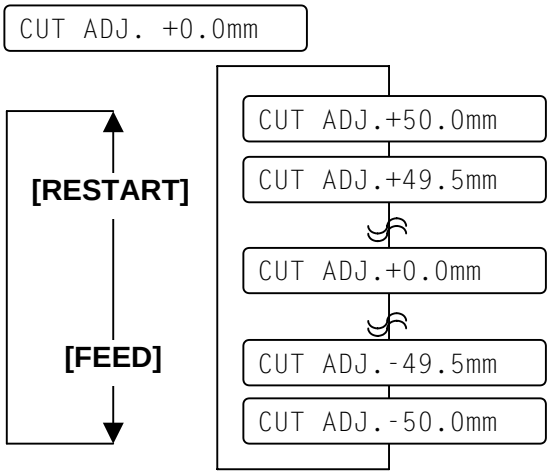


NOTES:

- *Cut issue is available only when the optional cutter unit (B-7208-QM) is installed. When you need the cutter, please contact your nearest TOSHIBA TEC service representative.*
- *The fine adjustment value equals the sum of the fine adjustment values set by the PC command and this parameter.*
  The maximum cut position fineadjustment value is ±50.0mm. When the value reaches the maximum, the value remains unchanged even if the subsequent fine adjustment is performed.

Cut Position Fine Adjustment

With this parameter you can fine adjust the cut position. When "<3>ADJUST SET" appears, press the **[PAUSE]** key twice.

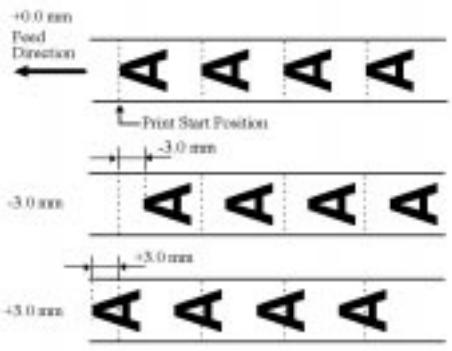


[FEED] key: Pressing the **[FEED]** key one time causes a –0.5mm change, up to –50.0 mm.
[RESTART] key: Pressing the **[RESTART]** key one time causes a +0.5mm change, up to +50.0 mm.

After completing the fine adjustment, press the **[PAUSE]** key.

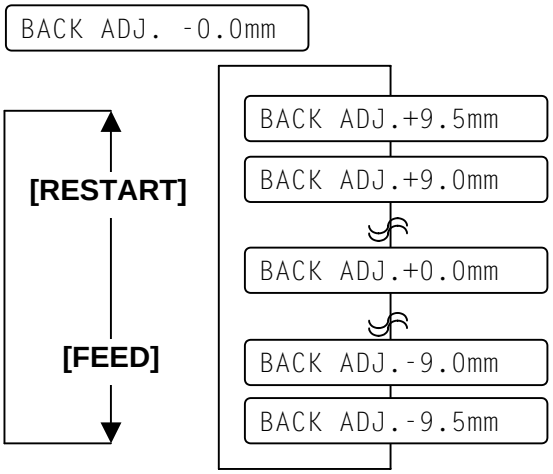
A4.4 Printer Parameter Fine Adjustment (Cont.)

Back Feed Length Fine Adjustment (Example)



Back Feed Length Fine Adjustment

With this parameter you can fine adjust the Back Feed Length. When "<3>ADJUST SET" appears, press the **[PAUSE]** key 3 times.



NOTE:

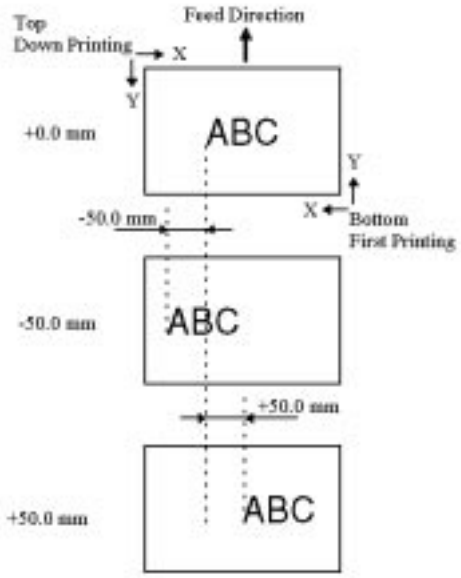
The fine adjustment value equals the sum of the fine adjustment values set by the PC command and this parameter.
The maximum back feed lengthfine adjustment value is ±9.5mm. When the value reaches the maximum, the value remains unchanged even if the subsequent fine adjustment is performed.

[FEED] key: Pressing the **[FEED]** key one time causes a –0.5mm change, up to –9.5 mm.
[RESTART] key: Pressing the **[RESTART]** key one time causes a +0.5mm change, up to +9.5 mm.

After completing the fine adjustment, press the **[PAUSE]** key.

A4.4 Printer Parameter Fine Adjustment (Cont.)

X Axis Fine Adjustment
(Example)

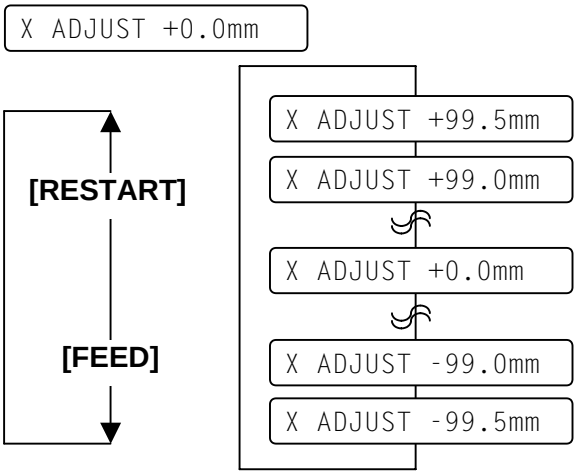


NOTES:

- *The X Axis fine adjustment is performed to fine adjust the print position in horizontal direction (left or right).*
- *Adjust the X axis within the effective print range. After the value reaches the coordinate 0, the value remains unchanged even if the subsequent fine adjustment is performed in the negative direction.*
- *This adjustment cannot be used in the Self Test mode or Test print.*
- *The fine adjustment value equals the sum of the fine adjustment values set by the PC command and this parameter. The maximum X axis fine adjustment value is ±99.5mm. When the value reaches the maximum, the value remains unchanged even if the subsequent fine adjustment is performed.*

X Axis Fine Adjustment

With this parameter you can fine adjust the print position on X Axis. When "<3>ADJUST SET" appears, press the **[PAUSE]** key 4 times.



[FEED] key: Pressing the **[FEED]** key one time causes a –0.5mm change, up to –99.5 mm.
[RESTART] key: Pressing the **[RESTART]** key one time causes a +0.5mm change, up to +99.5 mm.

After completing the fine adjustment, press the **[PAUSE]** key.

A4.4 Printer Parameter Fine Adjustment (Cont.)

NOTES:

- *The fine adjustment value equals the sum of the fine adjustment values set by the PC command and this parameter. The maximum print tone fine adjustment value is ±10 (Thermal Transfer Print) or +7 and –10 (Thermal Direct Print). When the value reaches the maximum, the value remains unchanged even if the subsequent fine adjustment is performed.*
- *This is useful when print tone is required to be fine adjusted e.g.) When the ribbon is changed to different type.*

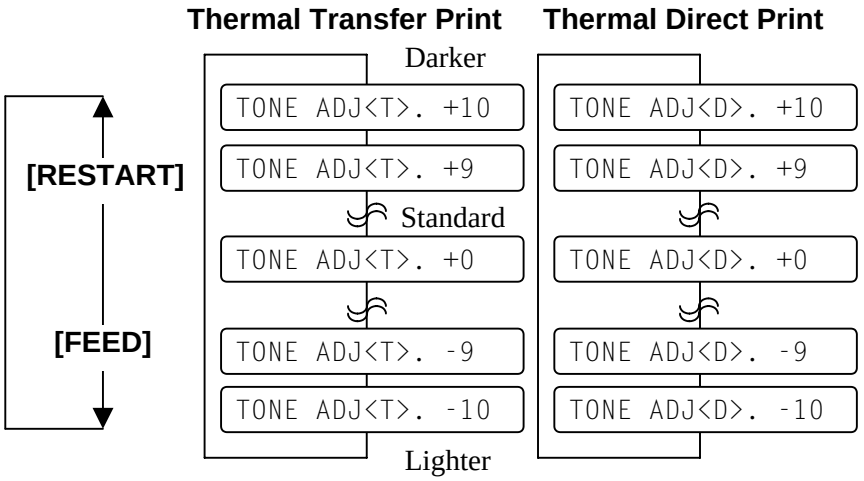
Print Tone Fine Adjustment (Thermal Transfer/Thermal Direct Print)

With this parameter you can fine adjust the Print Tone. When "<3>ADJUST SET" appears, press the **[PAUSE]** key 5 times to enter the Print Tone Fine Adjustment (Thermal transfer print) menu.

`TONE ADJ.<T> +0` Thermal Transfer

To change the screen to the Print Tone Fine Adjustment (Thermal direct print), press the **[PAUSE]** key again.

`TONE ADJ.<D> +0` Thermal Direct



[FEED] key: Pressing the **[FEED]** key one time causes a –1 tone change, up to –10 tones.
[RESTART] key: Pressing the **[RESTART]** key one time causes a +1 tone change, up to +10 tones.

After completing the fine adjustment, press the **[PAUSE]** key.

A4.4 Printer Parameter Fine Adjustment (Cont.)

NOTES:

- *The fine adjustment value equals the sum of the fine adjustment values set by the PC command and this parameter. The maximum ribbon motor voltage fine adjustment value is –15(Rewind Motor) or +10 and –15 (Feed Motor). When the value reaches the maximum, the value remains unchanged even if the subsequent fine adjustment is performed.*
- *One step corresponds to 5% of the standard voltage and up to 75% of the voltage can be decreased. Only for the feed motor, the voltage can be increased up to 50%.*
- *Please make this adjustment if a ribbon error occurs though the ribbon is not jammed nor depleted. If the problem cannot be resolved, please contact your nearest TOSHIBA TEC service representative.*

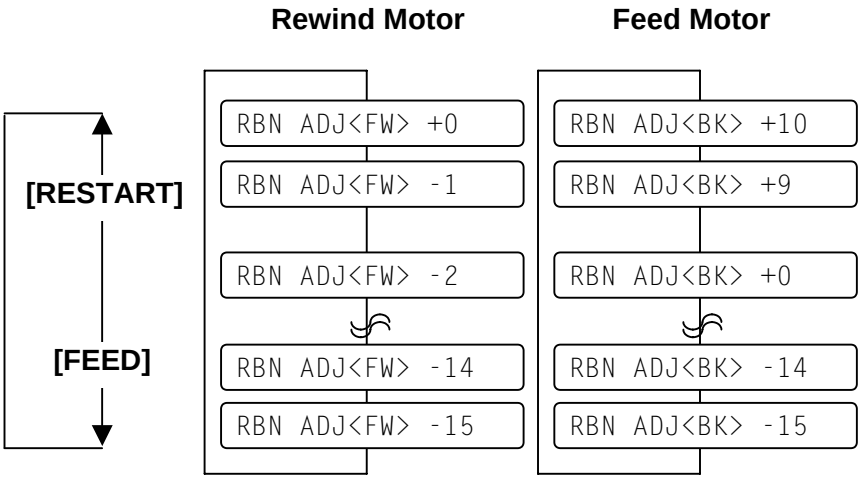
Ribbon Motor Voltage Fine Adjustment (Feed/Rewind Motor)

With this parameter you can fine adjust the Ribbon Motor Voltage (Torque). When "<3>ADJUST SET" appears, press the **[PAUSE]** key 7 times to enter the Ribbon Motor Voltage Fine Adjustment (Rewind Motor) menu.

`RBN ADJ<FW> +0` Rewind Motor

To change the screen to the Ribbon Motor Voltage Fine Adjustment (Feed Motor), press the **[PAUSE]** key again.

`RBN ADJ<BK> +0` Feed Motor



[FEED] key: Pressing the **[FEED]** key one time causes a –1 step change, up to –15 steps.
[RESTART]key: Pressing the **[RESTART]** key one time causes a +1 tone change, up to +0 steps (Rewind Motor) or +10 steps (Feed Motor).

After completing the fine adjustment, press the **[PAUSE]** key.

A4.4 Printer Parameter Fine Adjustment (Cont.)

> ***NOTE:***
> *This is useful to fine adjust the threshold when the media issue is improper even after the sensor threshold setting is performed. (See Section 6.5 Threshold Setting) If the problem cannot be resolved, please contact your nearest TOSHIBA TEC service representative.*

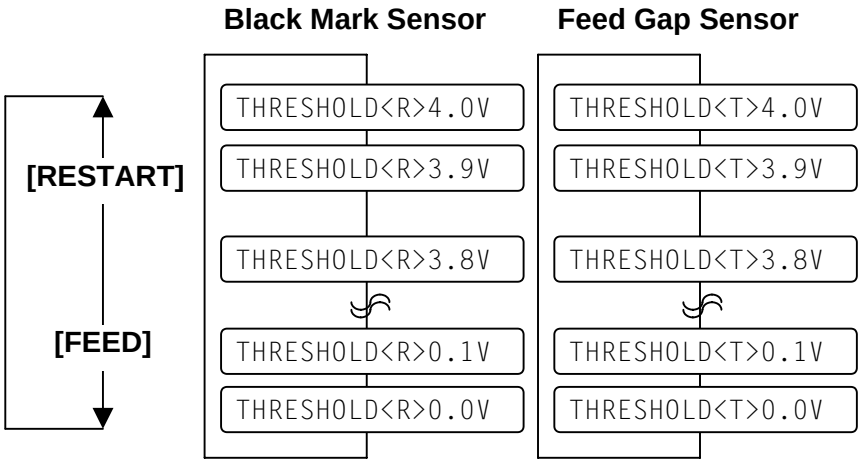
Threshold Manual Fine Adjustment (Black Mark/Feed Gap Sensor)

With this parameter you can fine adjust the Threshold of the Black Mark and Feed Gap Sensors. When "<3>ADJUST SET" appears, press the **[PAUSE]** key 9 times to enter the Threshold Manual Fine Adjustment (Black Mark Sensor) menu.

`THRESHOLD<R>1.0V` Black Mark Sensor

To change the screen to the Threshold Manual Fine Adjustment (Feed Gap Sensor), press the **[PAUSE]** key again.

`THRESHOLD<T>1.4V` Feed Gap Sensor



[FEED] key: Pressing the **[FEED]** key one time causes a –0.1V change, up to 0.0V.
[RESTART] key: Pressing the **[RESTART]** key one time causes a +0.1V change, up to +4.0V.

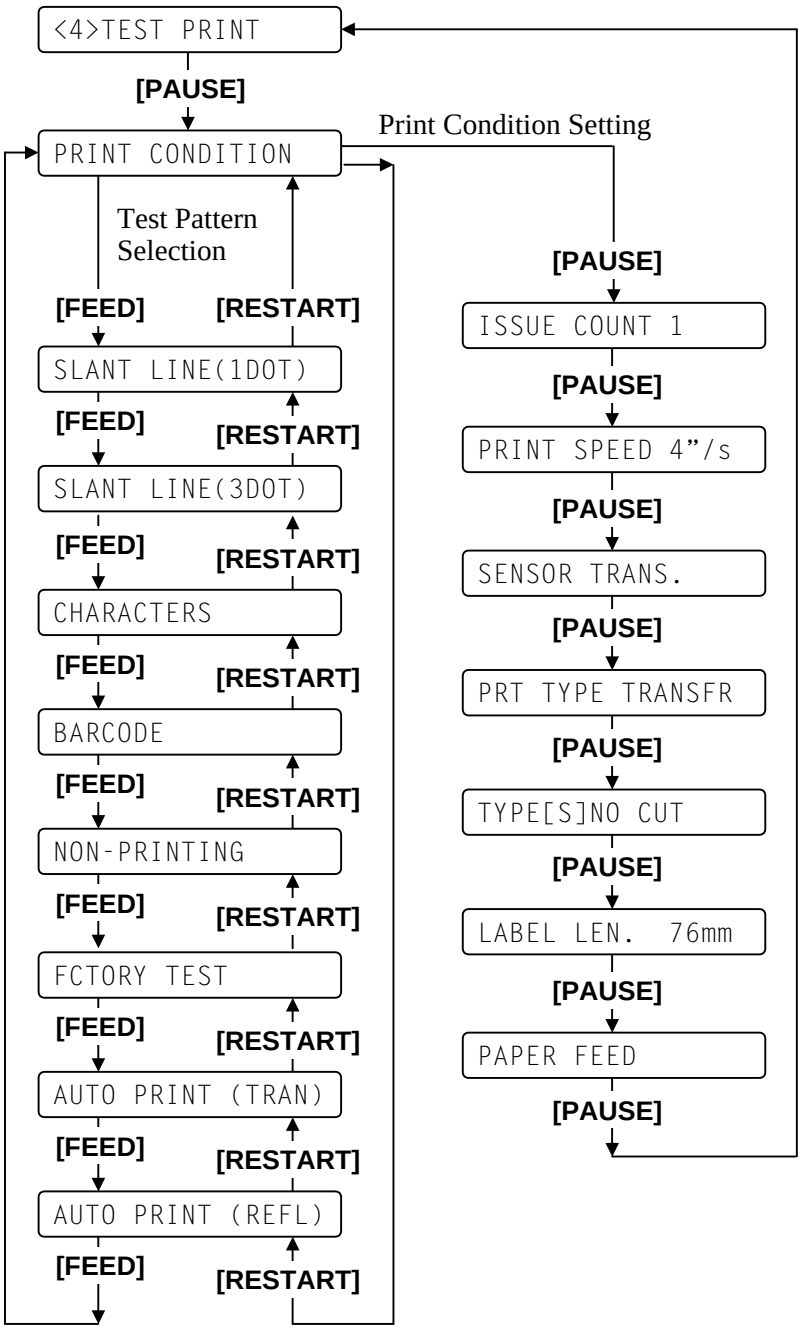
After completing the fine adjustment, press the **[PAUSE]** key.

A4.5 Test Print

Outline of Test Print

In the Test Print mode, you print the test pattern after setting up its conditions. This is useful for checking the printer by itself or for testing the quality of new ribbon or media.

The **Test Print** menu contains the following:



A4.5 Test Print (Cont.)

NOTES:

- *When pressing the **[FEED]** and **[RESTART]** keys at the same time in the Test Print menu, the message returns to "<4>TEST PRINT".*
- *If holding the **[FEED]** or **[RESTART]** key for 0.5 seconds or longer in the Test Print menu, the key is entered continuously.*
- *The fine adjustment parameters are effective for the Test Print. (except for X Axis Fine Adjustment.)*
- *If any error occurs, an error message appears, and the printer stops printing. After clearing the errors, press the **[PAUSE]** key to return to the System Mode menu. The printer does not resume printing automatically.*
- *A changed parameter becomes enabled by pressing the **[PAUSE]** key and is stored in memory until the printer is turned off.*

While pressing the **[FEED]** and **[PAUSE]** keys at the same time, turn on the printer. Hold both keys until the "<1>DIAG. Vx.x" Message appears.

```
<1>DIAG.   Vx.x
```

Press the **[FEED]** key 2 times.
The Test Print is ready to be performed.

```
<4>TEST PRINT
```

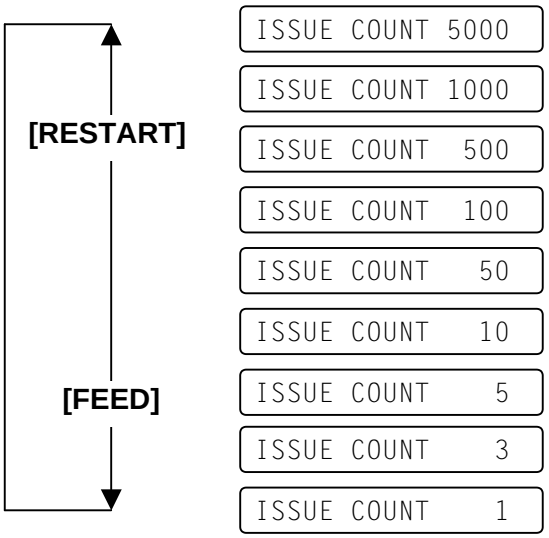
Specifying the Print Condition for the Test Print

The print conditions for the Test Print should be specified before printing. When "<4>TEST PRINT" appears, press the **[PAUSE]** key.

```
PRINT CONDITION
```

Issue Count Setting
To enter the Issue Count Setting menu, press the **[PAUSE]** key.

```
ISSUE COUNT    1
```

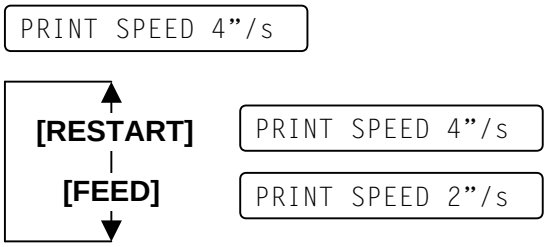


After selecting the issue count, press the **[PAUSE]** key to go to Print Speed Setting.

A4.5 Test Print (Cont.)

Print Speed Setting

Select the print speed for the test print from 4 inches/second and 2 inches/second.

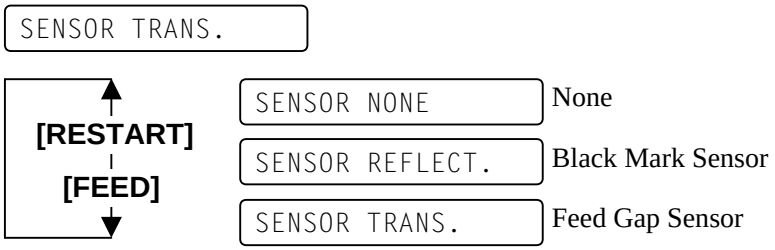


After selecting the print speed, press the **[PAUSE]** key to go to Sensor Type Selection.

Sensor Type Selection

Select the sensor type among "TRANS" (Feed Gap Sensor), "REFLECT" (Black Mark Sensor) and "NONE".

> ***NOTE:***
> *Select the sensor type which applies to the media being used. Basically, the Reflective Sensor (Black Mark Sensor) is for tag paper, and the Transmissive Sensor (Feed Gap Sensor) is for label.*

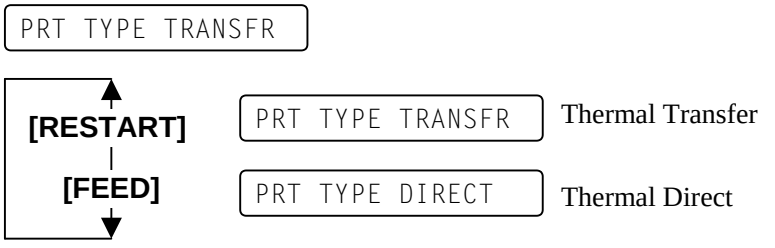


After selecting the sensor type, press the **[PAUSE]** key to go to Printing Mode Selection.

Printing Mode Selection

Select the printing mode for the test print between "TRANSFR" (Thermal transfer) and "DIRECT" (Thermal direct).

> ***NOTE:***
> *Select the printing mode which applies to the desired operating conditions.*
> *Basically, the Thermal Transfer is for the use of ribbon, and the Thermal Direct is for the use of thermal paper.*

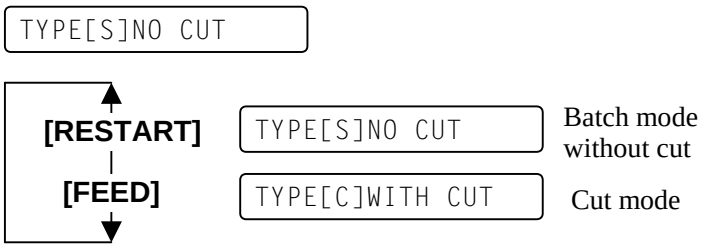


After selecting the printing mode, press the **[PAUSE]** key to go to Issue Mode Selection.

A4.5 Test Print (Cont.)

Issue Mode Selection

Select the issue mode for the test print by selecting between "[S]NO CUT" (Batch mode without cut) and "[C]WITH CUT" (Cut mode).

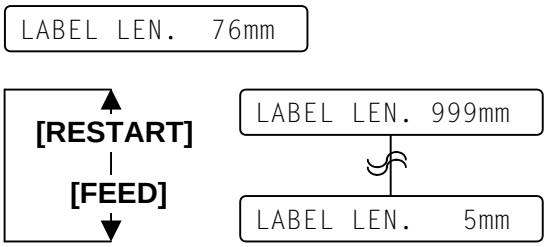


After selecting the Issue Mode, press the **[PAUSE]** key to go to Label Length Setting.

NOTE:
Cut mode is available only when the optional cutter module (B-7208-QM) is installed. When you need the cutter, please contact your nearest TOSHIBA TEC service representative.

Label Length Setting

Select the label length for the test print in a range from 5 mm to 999 mm.



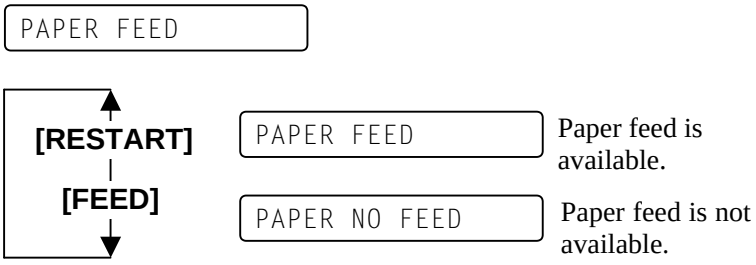
[FEED] key: Pressing the **[FEED]** key one time causes a –1 mm change, up to 5 mm.
[RESTART]key: Pressing the **[RESTART]** key one time causes a +1 mm change, up to 999 mm.

After selecting the label length, press the **[PAUSE]** key to go to Paper Feed Selection.

NOTE:
*Press and hold the **[RESTART]** or **[FEED]** key to advance the values quickly and continuously. To stop it, release the key.*

Paper Feed Selection

Select whether or not a paper feed is performed.



After selecting the paper feed, press the **[PAUSE]** key. The display returns to the "<4>TEST PRINT".

NOTE:
When "PAPER FEED" is selected, the printer feeds the media prior to a test print to adjust the print start position. When "PAPER NO FEED" is selected, the printer starts printing without a print start position adjustment. If the print start position adjustment is unnecessary, Select "PAPER NO FEED" and save media.

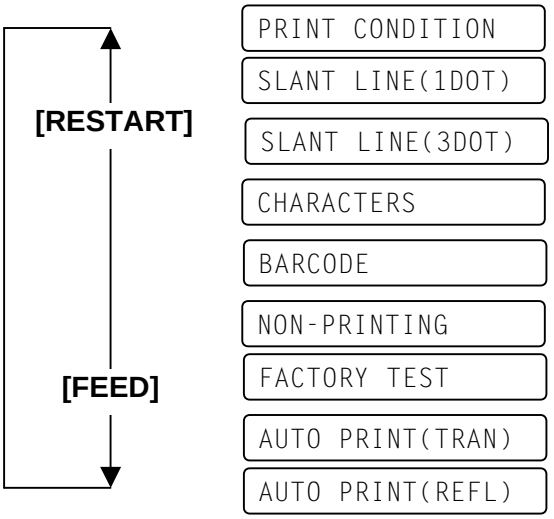
A4.5 Test Print (Cont.)

Test Print Pattern Selection

When "<4>TEST PRINT" appears after paper feed selection, press the **[PAUSE]** key.

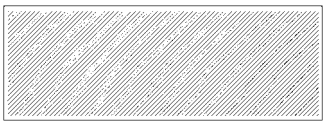
```
PRINT CONDITION
```

Select a test print pattern from the following options.



Slant Line (1 dot)

Print Sample of Slant Line (1 dot)



```
SLANT LINE(1DOT)
```

While selecting the Slant Line (1 dot), press the **[PAUSE]** key to start printing the slant line patterns (1 dot). After printing is completed, the display returns to "<4>TEST PRINT".

Pressing the **[PAUSE]** key causes the display to show "SLANT LINE (1DOT)" again. Then, press the **[FEED]** key.

Slant Line (3 dots)

Print Sample of Slant Line (3 dots)

```
SLANT LINE(3DOT)
```

While selecting the Slant Line (3 dots), press the **[PAUSE]** key to start printing the slant line patterns (3 dots). After printing is completed, the display returns to "<4>TEST PRINT".

Pressing the **[PAUSE]** key causes the display to show "SLANT LINE (3DOT)" again. Then, press the **[FEED]** key.

NOTE:

See A4.11.3 for further information.

A4.5 Test Print (Cont.)

Print Sample of Characters

Characters

CHARACTERS

While selecting the Characters, press the **[PAUSE]** key to start printing the characters. After printing is completed, the display returns to "<4>TEST PRINT".

Pressing the **[PAUSE]** key causes the display to show "CHARACTERS" again. Then, press the **[FEED]** key.

Print Sample of Barcodes

Barcode

BARCODE

While selecting the Barcode, press the **[PAUSE]** key to start printing the bar codes. After printing is completed, the display returns to "<4>TEST PRINT".

Pressing the **[PAUSE]** key causes the display to shown "BARCODE" again. Then, press the **[FEED]** key.

NOTE:

The Non-Printing function simply looks like a media feed.

Print Sample of Non-print

Non-Printing

NON-PRINTING

While selecting the Non-printing, press the **[PAUSE]** key to start issuing a blank page of media. After printing is completed, the display returns to "<4>TEST PRINT".

Pressing the **[PAUSE]** key causes the display to shown "NON-PRINTING" again. Then, press the **[FEED]** key.

Factory Test

FACTORY TEST

While selecting the Factory test, press the **[PAUSE]** key to start printing the factory test pattern. After printing is completed, the display returns to "<4>TEST PRINT".

Pressing the **[PAUSE]** key causes the display to indicate "FACTORY TEST" again. Then, press the **[FEED]** key.

mark (Lower side) or Feed

NOTES:

- *Factory test print conditions: One paper feed, Slant lines (3 dots), Bar codes, Characters, Item count: 5 pcs. each, Print speed: 4"/sec., Sensor type: Black mark (Lower side) or Feed gap sensor*
- *When the feed gap sensor is selected, a gap length is 3 mm.*
  Print method: Thermal transfer, Issue mode: Batch printing (without cut), Label length: 76 mm, Print tone fine adjustment.

A4.5 Test Print (Cont.)

> ***NOTE:***
> *Select "AUTO PRINT (TRAN)" when using labels, and "AUTO PRINT (REFL)" when using tag paper.*

Auto Print

AUTO PRINT(TRAN)	Feed Gap Sensor
AUTO PRINT(REFL)	Black Mark Sensor

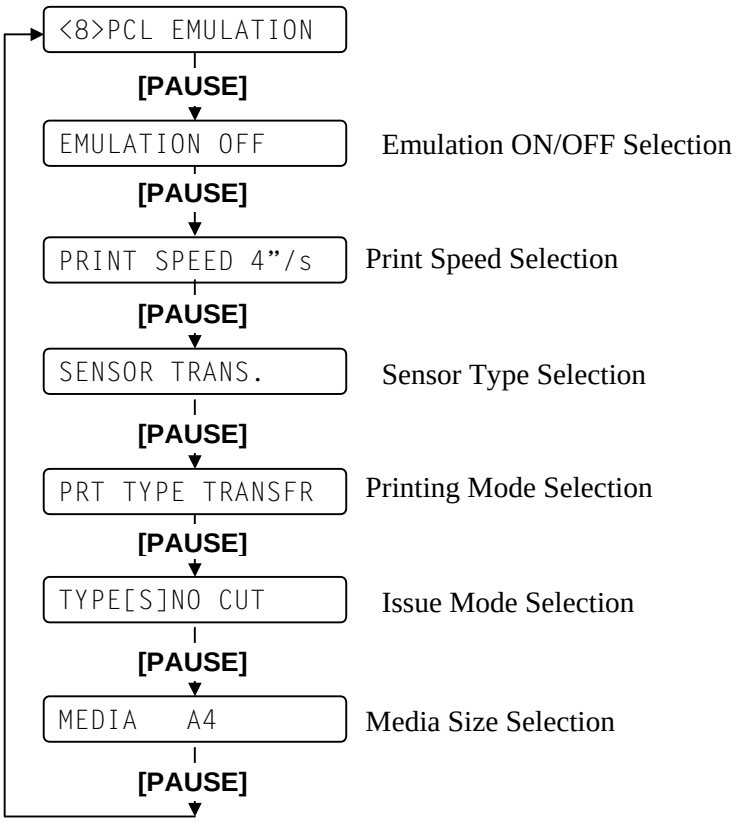
While selecting the Auto Print, press the **[PAUSE]** key to feed one media and print slant lines (3 dots) on 5 pieces of media.
Next, press the **[PAUSE]** key to print bar codes on 5 pieces of media. Pressing the **[PAUSE]** key again causes the printer to print characters on 5 pieces of media.

A4.6 PCL Emulation Setting

> ***Outline of the PCL Emulation***
> *The PCL Emulation is the function to emulate Hewlett Packard laser printers. When your laser printer is a Hewlett Packard, you can use the B-852 printer in place of the laser printer without changing the printer driver by selecting "EMULATION ON". In this case, the Print speed, Sensor type, Printing mode, Issue mode, and Media size should be specified.*

> ***NOTE:***
> *This function is available only when the optional PCL Emulation Board (B-7708-PCL-QM) is installed. When you need the PCL Emulation Board, please contact your nearest TOSHIBA TEC service representative.*

The **PCL Emulation Setting** menu contains the following:



While pressing the **[FEED]** and **[PAUSE]** keys at the same time, turn on the printer. Hold both keys until the "<1>DIAG. Vx.x" Message appears.

<1>DIAG. Vx.x

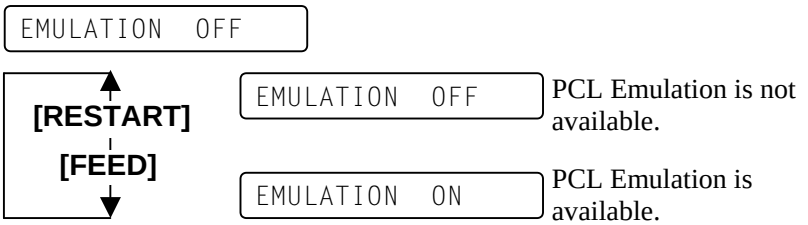
Press the **[FEED]** key 3 times.
The printer is at the start of the PCL Emulation menu.

<8>PCL EMULATION

When "<8>PCL EMULATION" appears, press the **[PAUSE]** key.

A4.6 PCL Emulation Setting (Cont.)

Emulation ON/OFF Selection

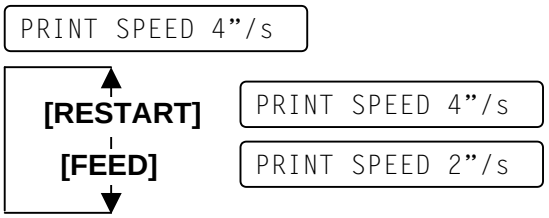


When "EMULATION OFF" is selected, press the **[PAUSE]** key to return to "<8>PCL EMULATION".

When "EMULATION ON" is selected, press the **[PAUSE]** key to proceed to the detailed setting menus.

Print Speed

With this parameter select the print speed for the PCL Emulation.

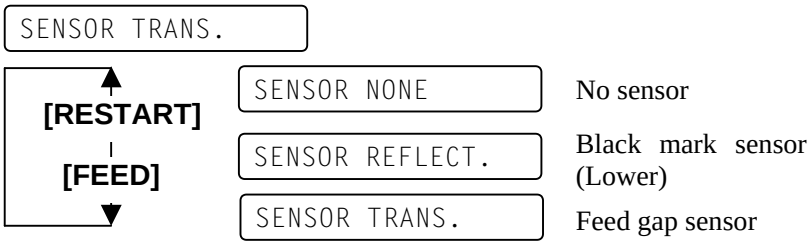


After selecting the print speed, press the **[PAUSE]** key to show the Sensor Type Selection menu.

> ***NOTE:***
> *Select the appropriate sensor type to match the media being used. Basically, the Reflective Sensor (Black Mark Sensor) is for tag paper, and the Transmissive Sensor (Feed Gap Sensor) is for label..*

Sensor Type Selection

With this parameter select the sensor type used for the PCL Emulation.

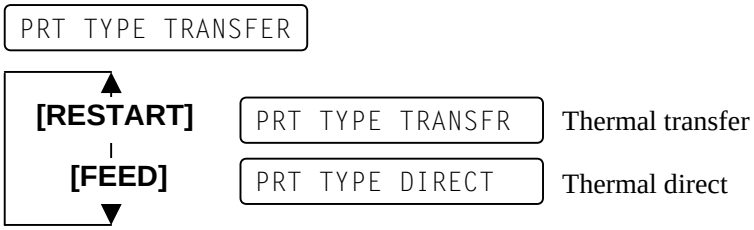


After selecting the sensor type, press the **[PAUSE]** key to show the Printing Method Selection menu.

> ***NOTE:***
> *Select the appropriate Print Mode which matches the media being used. Basically, Thermal Transfer is for the use of ribbon, and Thermal Direct is for the use of thermal media.*

Printing Mode Selection

With this parameter select the printing method for the PCL Emulation.



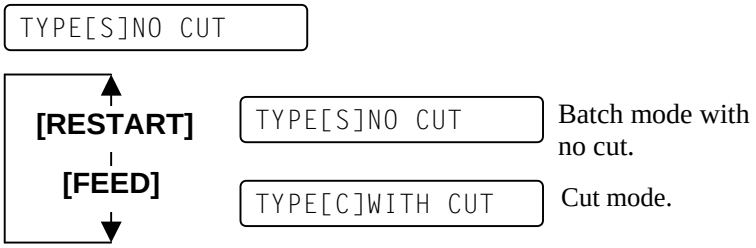
After selecting the printing mode, press the **[PAUSE]** key to show the Issue Mode Selection menu.

A4.6 PCL Emulation Setting (Cont.)

> ***NOTE:***
> *Cut issue is available only when the optional cutter module (B-7208-QM) is installed. When you need the cutter, please contact your nearest TOSHIBA TEC service representative.*

Issue Mode Selection

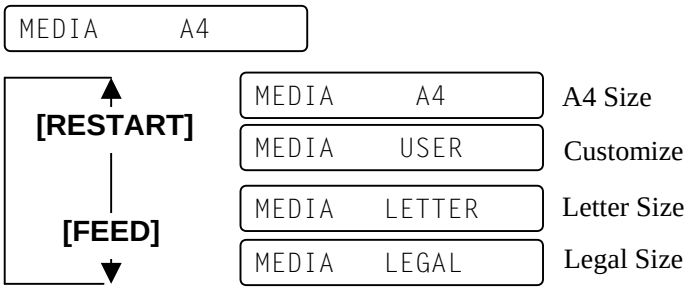
With this parameter select the Issue Mode for the PCL Emulation.



After selecting the issue mode, press the **[PAUSE]** key to show the Media Size Selection menu.

Media Size Selection

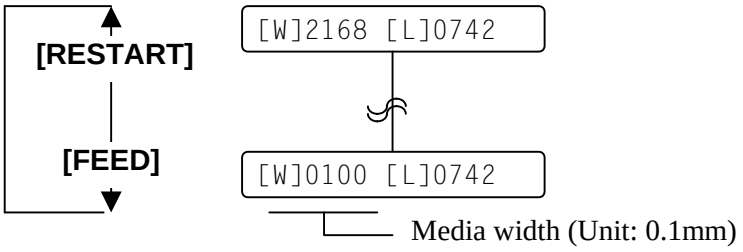
With this parameter select the Media Size for the PCL Emulation.



After selecting the media size, press the **[PAUSE]** key.
When "A4", "LEGAL", or "LETTER" is selected, the display returns to **"<8>PCL EMULATION".**

When "USER" is selected, the Media Width Setting menu is displayed.

Media Width Setting



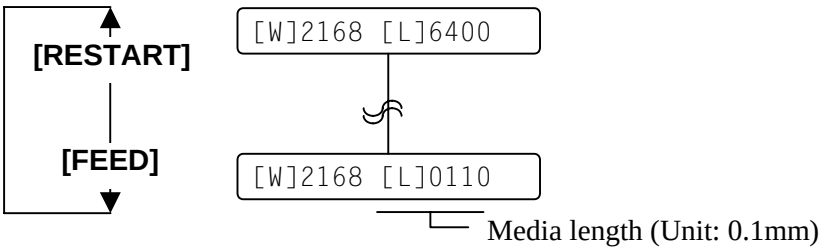
> ***NOTE:***
> *If holding the **[RESTART]** or **[FEED]** key for 0.5 seconds or longer in the parameter setting, the key is entered continuously.*

[FEED] key: Pressing the **[FEED]** key one time causes a –1 change, up to 100.
[RESTART]key: Pressing the **[RESTART]** key one time causes a +1 change, up to 2168.

After selecting the media width, press the **[PAUSE]** key to show the Media Length Setting menu.

A4.6 PCL Emulation Setting (Cont.)

Media Length Setting



[FEED] key: Pressing the **[FEED]** key one time causes a –1 change, up to 110.
[RESTART] key: Pressing the **[RESTART]** key one time causes a +1 change, up to 6400.

After selecting the media length, press the **[PAUSE]** key to return to "<8>PCL EMULATION".

A4.7 Additional Information

A4.7.1 Self-Diagnostic Test Result Sample and Descriptions

- **Print Sample**

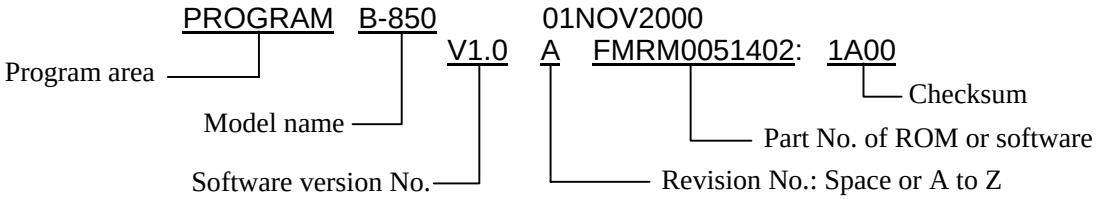
(1)	PROGRAM	B-850	01NOV2000
		V1.0A	FMRM0051402: 1A00
(2)	BOOT	B-850	16NOV2000
		V1.0	FMRM0051601:8500
(3)	FONT	5600	
(4)	KANJI	8900	
(5)	EEPROM	OK	
(6)	SDRAM	8MB	
(7)	CARD	SLOT1	ATA
		SLOT2	LAN
(8)	SENSOR1	00000000, 00000000	
(9)	SENSOR2	[H]20°C [A]22°C [S]25°C	
		[R(U)]4.2V [R(L)]4.0V	
		[T]2.5V	
(10)	EXP.I/O	NG	
(11)	KEY BRD	NG	

NOTES:

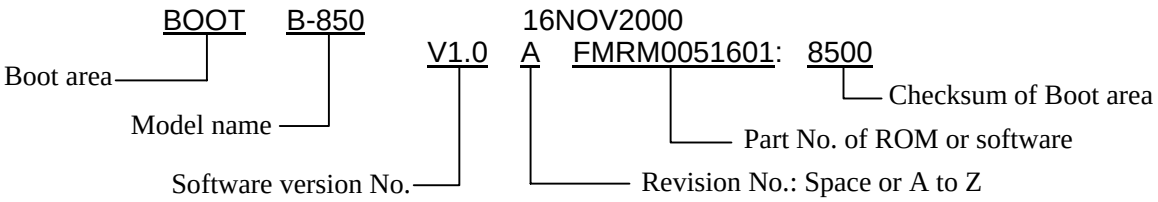
1. *Print conditions:*
   Preset count: 1, Print speed: 4"/sec., Sensor: No sensor, Printing method: Thermal transfer, Supply length: 78 mm, Issue mode: Batch printing
2. *Software version No., Part No. of ROM and checksum will vary according to the software version of PROGRAM ROM.*
3. *The last two digits of the checksum are usually "00".*
4. *When Kanji ROM is not installed, the checksum becomes "0000".*
5. *The symbol"°" of "°C" may not be printed depending on the type of character code.*

- **Descriptions**

(1) Program ROM Check (Model Name, Date, Version, Part number, Checksum)

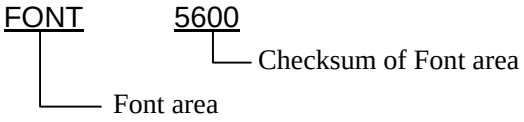


(2) Boot Check (Model Name, Date, Version, Part Number, Checksum)

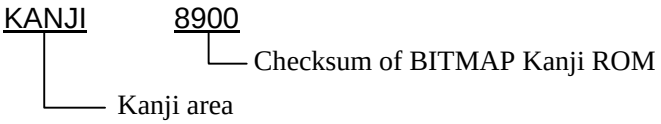


A4.7.1 Self-Diagnostic Test Result Sample and Descriptions (Cont.)

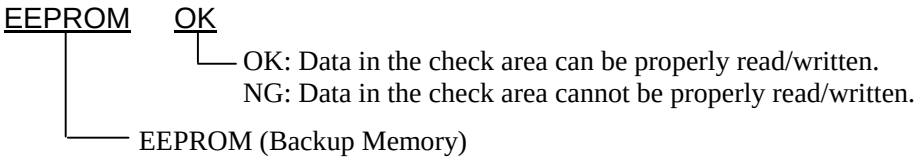
(3) Alphanumeric Font ROM Check



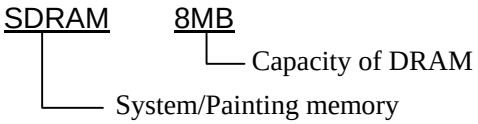
(4) Kanji ROM Check



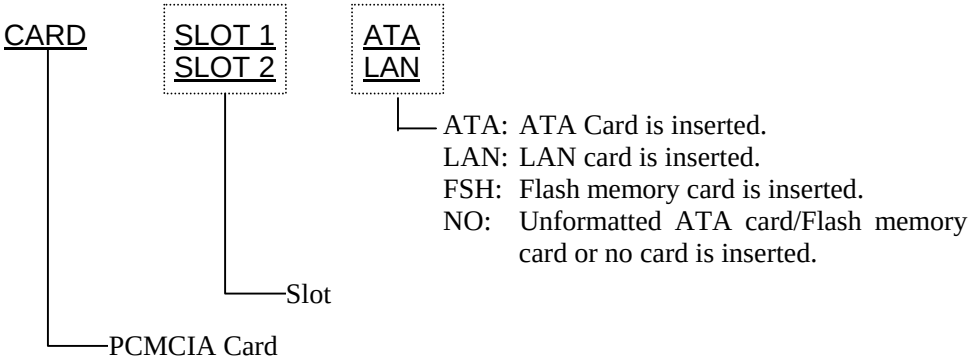
(5) EEPROM Check


EEPROM
OK
OK: Data in the check area can be properly read/written.
NG: Data in the check area cannot be properly read/written.
EEPROM (Backup Memory)

(6) SDRAM Capacity



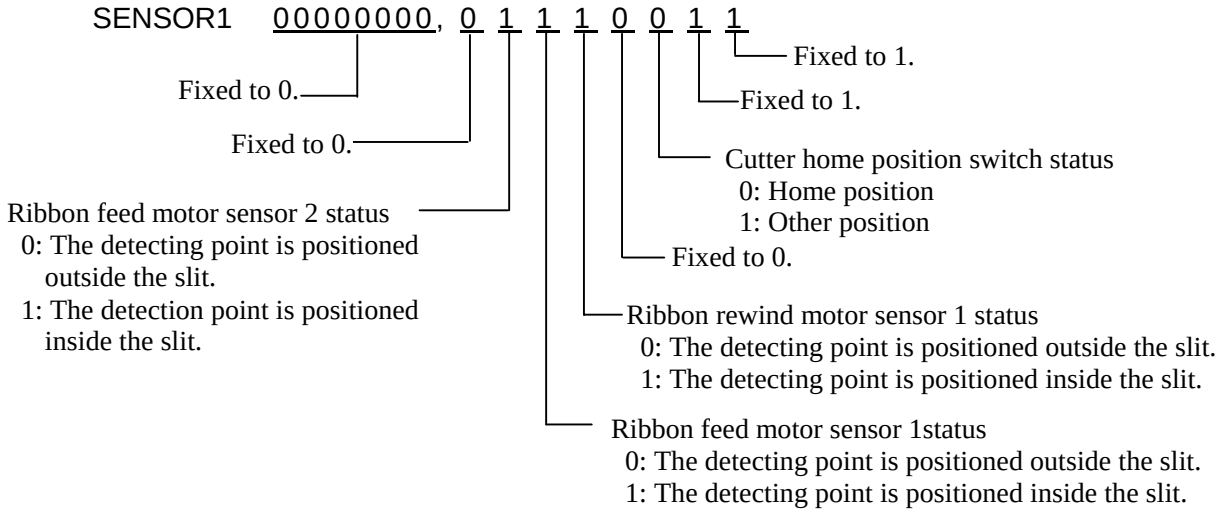
(7) PC Card Slot Check



A4.7.1 Self-Diagnostic Test Result Sample and Descriptions (Cont.)

(8) Sensor 1 Check

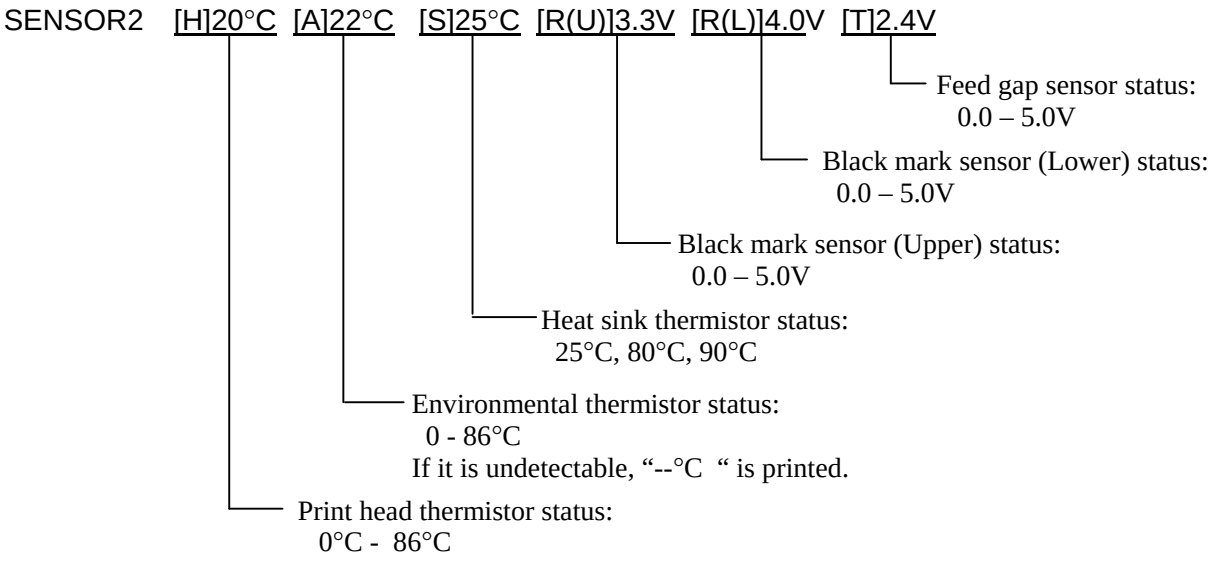
The status of the Cutter Home Position Sensor, Ribbon Feed Motor Sensor, and Ribbon Rewind Motor Sensor are printed.


SENSOR1 00000000, 0 1 1 1 0 0 1 1
Fixed to 1.
Fixed to 0.
Fixed to 1.
Fixed to 0.
Cutter home position switch status
0: Home position
1: Other position
Ribbon feed motor sensor 2 status
0: The detecting point is positioned outside the slit.
1: The detection point is positioned inside the slit.
Fixed to 0.
Ribbon rewind motor sensor 1 status
0: The detecting point is positioned outside the slit.
1: The detecting point is positioned inside the slit.
Ribbon feed motor sensor 1status
0: The detecting point is positioned outside the slit.
1: The detecting point is positioned inside the slit.

Sensor/Switch	Print status content description
Cutter home position switch	Indicates whether or not the cutter is at the home position.
Ribbon rewind motor sensor 1 Ribbon feed motor sensors 1 and 2	Controls ribbon motor rotation by detecting the slit on the ribbon rewind motor and the ribbon feed motor. Indicates the position of the slit sensor.

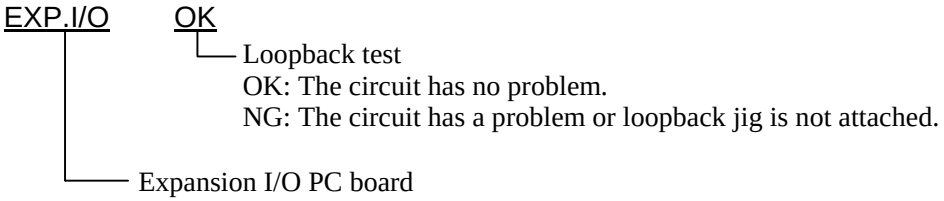
(9) Sensor 2 Check

The status of the Print Head Thermistor, Environmental Temperature Thermistor, Heat Sink Thermistor, Black Mark Sensor (Upper/Lower), and Feed Gap Sensor are printed.


SENSOR2 [H]20°C [A]22°C [S]25°C [R(U)]3.3V [R(L)]4.0V [T]2.4V
Feed gap sensor status:
0.0 – 5.0V
Black mark sensor (Lower) status:
0.0 – 5.0V
Black mark sensor (Upper) status:
0.0 – 5.0V
Heat sink thermistor status:
25°C, 80°C, 90°C
Environmental thermistor status:
0 - 86°C
If it is undetectable, "--°C " is printed.
Print head thermistor status:
0°C - 86°C

A4.7.1 Self-Diagnostic Test Result Sample and Descriptions (Cont.)

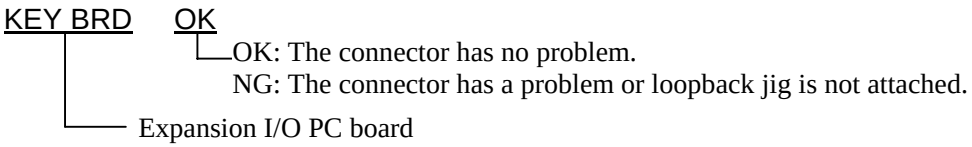
(10) Expansion I/O Interface Check


EXP.I/O
OK
Loopback test
OK: The circuit has no problem.
NG: The circuit has a problem or loopback jig is not attached.
Expansion I/O PC board

NOTE:

Fot this check a loopback jig is required. For the loopback jig, please contact your nearest TOSHIBA TEC service representative.

(11) DIN Connector for the Keyboard (KB-80) Check


KEY BRD
OK
OK: The connector has no problem.
NG: The connector has a problem or loopback jig is not attached.
Expansion I/O PC board

NOTE:

Fot this check a loopback jig is required. For the loopback jig, please contact your nearest TOSHIBA TEC service representative.

A4.7.2 Maintenance Counter/Parameter Check Print Sample and Descriptions

- **Print Sample**

(1)	TOTAL FEED		1.1Km	
(2)	FEED		1.1Km	
(3)	PRINT		0.5Km	
(4)	CUT		96	
(5)	RIBBON		3H	
(6)	232C ERR		255	
(7)	SYSTEM ERR		0	
(8)	POWER FAIL		0	
	[PC]		[KEY]	
(9)	FEED	+2.0mm	FEED	+0.0mm
(10)	CUT	+0.0mm	CUT	+1.0mm
(11)	BACK	+0.0mm	BACK	+0.0mm
(12)	TONE(T)	+0 step	TONE(T)	+0 step
(13)	TONE (D)	+0 step	TONE(D)	+0 step
(14)	RBN(FW)	-10	RBN (FW)	-8
(15)	RBN (BK)	+0	RBN (BK)	+0
(16)	X ADJ.	+0.0mm		
(17)	THRESHOLD (R)		1.0V	
(18)	THRESHOLD (T)		0.7V	
(19)	FONT		[PC-850] [0]	
(20)	CODE		[AUTO]	
(21)	SPEED		[9600]	
(22)	DATA LENG.		[8]	
(23)	PARITY		[EVEN]	
(24)	CONTROL		[XON+READY AUTO]	
(25)	MESSAGE		[ENGLISH]	
(26)	FORWARD WAIT		[ON]+0.0mm	
(27)	FEED KEY		[FEED]	
(28)	KANJI		[TYPE1]	
(29)	EURO CODE		[B0]	
(30)	AUTO HD CHK		[OFF]	
(31)	WEB PRINTER		[OFF]	
(32)	SILENT PRINT		[ON]	
(33)	KB80 CONNECT		[OFF]	
(34)	PRTR IP ADDR		[192.168.010.020]	
(35)	GATE IP ADDR		[000.000.000.000]	
(36)	SUBNET MASK		[255.255.255.000]	
(37)	TTF AREA		[704KB]	
(38)	EXT CHR AREA		[128KB]	
(39)	BASIC AREA		[64KB]	
(40)	PC SAVE AREA		[64KB]	
(41)	PCL EMULATION		[ON]	
(42)	PRINT SPEED		[4”/S]	
(43)	SENSOR		[TRANS.]	
(44)	PRINT TYPE		[TRANSFER]	
(45)	TYPE		[NO CUT]	
(46)	MEDIA		[USER 2169X0742]	
(47)	SOCKET PORT		[OFF][08000]	
(48)	BASIC		[OFF]	
(49)	BASIC TRACE		[OFF]	

NOTE:
Print conditions:
Preset count: 1, Print speed: 4”/sec., Sensor: No sensor, Printing mode: Thermal transfer, Media length: 170 mm, Issue mode: Batch printing

A4.7.2 Maintenance Counter/Parameter Check Print Sample and Descriptions (Cont.)

- **Descriptions of the Maintenance Counter**

No.	Item	Count Condition	Range
(1)	Total media distance covered	Counted when the feed motor is driven to feed, print and issue the media. (Counted also during ribbon saving operation and back feed.) See NOTE 6 and 7.	0.0 to 2000.0 km
(2)	Media distance covered		0.0 to 181.9 km
(3)	Print distance	Counted while printing. (Feeding and back feed are not counted.) See NOTE 2.	0.0 to 200.0 km
(4)	Cut count	Counts every cut. [See NOTE 3.]	0 to 1000000 times
(5)	Ribbon motor driving time	Counts when the ribbon motor is driven to feed, print and issue the media. (The driving time is not counted during ribbon saving operation, but is during back feed.)	0 to 2000 hours
(6)	RS-232C hardware error count	Counted when a parity, overrun or framing error occurs. See NOTE 5.	0 to 255 times
(7)	System error count	Counted when any error occurs.	0 to 15 times
(8)	Momentary power failure count	Counts the number of times the power restores while the CPU is busy after reset.	0 to 15 times

NOTES:

1. *Item from (2) through (10) are initialized to "0" after RAM clear.*
2. *If the Print distance is 5.5m or less, it is rounded down and no data is added to the memory at power off.*
3. *If the count is 31 counts or less, it is rounded down and no data is added to the memory at power off.*
4. *If the driving time is 27 sec. or less, it is rounded down and no data is added to the memory at power off.*
5. *When a sent command results in an error, the same number as the data capacity of the command is counted by byte.*
6. *If the media distance covered is 69.4 cm or less, it is rounded down and no data is added to the memory at power off.*
7. *When the media distance covered reached to the maximum, the maintenance counter should be cleared. Otherwise, the total media distance covered will not be updated. For the maintenance counter clear, please contact your nearest TOSHIBA TEC service representative.*

- **Descriptions of the Parameters**

No.	Item	Contents
(9)	Feed length fine adjustment (PC), (KEY)	-50.0 mm to +50.0 mm
(10)	Cut position fine adjustment (PC), (KEY)	-50.0 mm to +50.0 mm
(11)	Back feed length fine adjustment (PC), (KEY)	-9.9 mm to +9.9 mm
(12)	Print tone fine adjustment (Thermal transfer), (PC), (KEY)	-10 step to +10 step
(13)	Print tone fine adjustment (Thermal direct), (PC), (KEY)	-10 step to +10 step
(14)	Ribbon rewind motor driving voltage fine adjustment (PC), (KEY)	-15 step to +0 step
(15)	Ribbon feed motor driving voltage fine adjustment (PC), (KEY)	-15 step to +10 step
(16)	X axis fine adjustment	-99.5 mm to +99.5 mm
(17)	Threshold manual fine adjustment for the black mark sensor	0.0V to 4.0V
(18)	Threshold manual fine adjustment for the feed gap sensor	0.0V to 4.0V

A4.7.2 Maintenance Counter/Parameter Check Print Sample and Descriptions (Cont.)

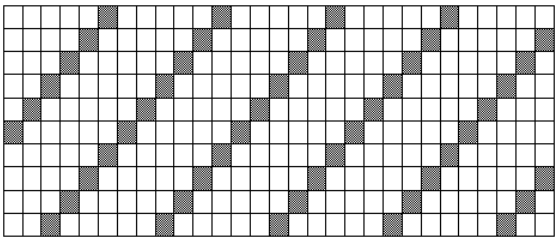
No.	Item	Contents
(19)	Character	PC-850 PC-851 PC-1252 LATIN9 PC-852 PC-855 PC-1253 Arabic PC-857 PC-1250 PC-1254 PC-8 PC-1251 PC-1257
	Font zero	0: No slash used. Ø: Slash used.
(20)	Control code	AUTO: Automatic selection ESC LF NUL: ESC LF NUL mode {|}: Mainframe mode 1B 1C 1D: Manual
(21)	Baud rate	2400: 2400 bps 4800: 4800 bps 9600: 9600 bps 19200: 19200 bps
(22)	Data length	7: 7 bits 8: 8 bits
(23)	Parity	NON: None ODD: ODD EVEN: EVEN
(24)	Transmission control code	XON/XOFF: XON/XOFF READY/BUSY: READY/BUSY (DTR) XON+READY AUTO: XON/XOFF+READY/BUSY (DTR) XON/XOFF AUTO: XON/XOFF READY/BUSY RTS: RTS
(25)	Language selection for LCD message	ENGLISH: English GERMAN: German FRENCH: French DUTCH: Dutch SPANISH: Spanish JAPANESE: Japanese ITALIAN: Italian
(26)	Auto forward wait in cut mode	ON: Available OFF: Unavailable
(27)	Feed key function	FEED: Feeds one label PRINT: Prints image buffer on one label
(28)	Kanji code type (Not supported QQ/QP models)	TYPE 1: Windows code TYPE 2: Original code
(29)	Euro font code	20H to FFH
(30)	Auto print head broken element check	ON: Available OFF: Unavailable
(31)	Web printer function	ON: Available OFF: Unavailable
(32)	Silent print	ON: Available (Must be fixed to ON.)
(33)	KB-80 keyboard connection	ON: Connect OFF: Not connect

A4.7.2 Maintenance Counter/Parameter Check Print Sample and Descriptions (Cont.)

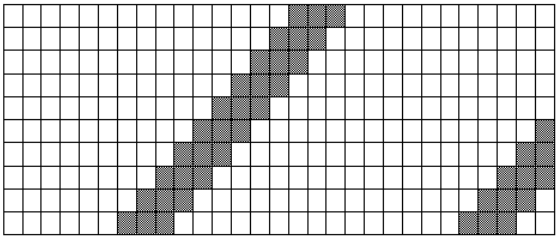
No.	Item	Contents
(34)	Printer IP address	***.***.***.***
(35)	Gateway IP address	***.***.***.***
(36)	Subnet mask	***.***.***.***
(37)	True type font registration area size	0 KB to 896 KB (unit of 64 KB)
(38)	External character registration area size	0 KB to 896 KB (units of 64 KB)
(39)	Basic file store area size	0 KB to 896 KB (units of 64 KB)
(40)	PC saving area size	0 KB to 896 KB (units of 64 KB)
(41)	PCL Emulation	ON: Available OFF: Unavailable
(42)	Print speed for PCL emulation	4”/sec. 2”/sec.
(43)	Sensor type for PCL emulation	NONE: None REFLECT: Black mark sensor TRANS: Feed gap sensor
(44)	Printing mode for PCL emulation	TRANSFR: Thermal transfer DIRECT: Thermal direct
(45)	Issue mode for PCL emulation	[S] NO CUT: Batch mode with no cut [C]WITH CUT: Cut mode
(46)	Media size for PCL emulation	A4 LEGAL LETTER User
(47)	Socket port number	ON: Available OFF: Unavailable Port No. 0 to 65535
(48)	BASIC interpreter setting	ON: Available OFF: Unavailable
(49)	BASIC interpreter trace setting	ON: Available OFF: Unavailable

A4.7.3 Magnified Views of Slant Line Pattern

- 1-dot Slant Line (Black Area Ratio: 16.7%)



- 3-Dot Slant Line (Black Area Ratio: 16.7%)



APPENDIX 5 PRINT SAMPLES

■ Font

<A>Times Roman medium:8point

<B>Times Roman medium:10point

<C>Times Roman bold:10point

<D>Times Roman bold:12point

<E>Times Roman bold:14point

<F>Times Roman italic:12point

<G>Helvetica medium:6point

<H>Helvetica medium:10point

<I>Helvetica medium:12point

<J>Helvetica bold:12point

<K>Helvetica bold:14point

<L>Helvetica italic:12point

<M>PRESENTATION BOLD:18POINT

<N>Letter Gothic medium:9.5point

<O>Prestige Elite medium:7point

<P>Prestige Elite bold:10point

<Q>Courier medium:10point

<R>Courier bold:12point

<S>OCR-A:12point

<T>OCR-B:12point

<Outline Font:B>Helvetica bold

<Outline Font:B>Helvetica bold

APPENDIX 5 PRINT SAMPLES (Cont.)

■ Bar codes

0: JAN8, EAN8

1: MSI

2: Interleaved 2 of 5

3: CODE39 (Standard)

4: NW7

5: JAN13, EAN13

6: UPC-E

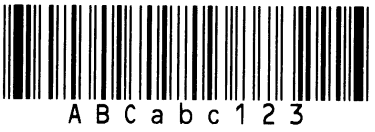
7: EAN13+2 digits

8: EAN13+5 digits

A:CODE128

B: CODE39 (Full ASCII)

C: CODE93



G: UPC-E+2 digits

H: UPC-E+5 digits

I: EAN8+2 digits

J: EAN8+5 digits

APPENDIX 5 PRINT SAMPLES (Cont.)

K: UPC-A

L: UPC-A+2 digits

M: UPC-A+5 digits

N: UCC/EAN128

O: Industrial 2 of 5

P: PDF417

Q: Data Matrix

R: Customer bar code

S: Customer bar code of high priority

T: QR code

U: POSTNET

V: RM4SCC

W: KIX Code

X: Micro PDF417

Z: MaxiCode

GLOSSARIES

Bar code
A code which represents alphanumeric characters by using a series of black and white stripes in different widths. Bar codes are used in various industrial fields: Manufacturing, Hospitals, Libraries, Retail, Transportation, Warehousing, etc. Reading bar codes is a fast and accurate means of capturing data while keyboard entry tends to be slow and inaccurate.

Batch mode
Issue mode that continuously prints media until the specified number of media has been printed.

Black mark
A mark printed on the media so that the printer can maintain a constant print position by detecting this mark.

Black mark sensor
A reflective sensor which detects the difference of potential between the black mark and print area to find the print start position.

Cut mode
Printer mode of operation where an optional cutter module is installed to automatically cut media from the supply roll after they are printed. The print command can specify to cut every media or to cut after a set number of media have been printed.

Cutter module
A device used to cut the media.

DPI
Dot Per Inch
The unit used to express print density.

Expansion I/O interface
An optional interface circuit that may be installed into the B-852 printer to allow the printer to be connected to an external device such as a wrapping machine and to receive feed, print start, and pause signals from the external device and to send back print, pause, and error status signals to the external device.

Feed gap sensor
A transmissive sensor which detects the difference of potential between the gap between labels and the label to find the print position of the label.

Font
A complete set of alphanumeric characters in one style of type. E.g. Helvetica, Courier, Times

Gap
Clearance between labels

IPS
Inch per second
The unit used to express print speed.

KB-80 keyboard interface
This interface is standard on the B-852 printer to allow the optional KB-80 keyboard to be attached to the printer allowing it to be operated in a standalone condition. Label programs may be stored in the KB-80 flash memory and labels printed through commands and data input through the keyboard instead of from a host computer.

LCD
Liquid Crystal Display
Installed on the operation panel and displays operation modes, error message and so on.

Label
A type of media with adhesive backing.

Media
Material on which data is printed by the printer. Label, tag paper, fanfold paper, perforated paper, etc.

PCMCIA interface
An optional interface circuit that may be installed into the B-852 printer to allow the use of the small credit card sized PC cards such as flash memory cards and LAN cards. PCMCIA is the acronym for Personal Computer Memory Card International Association.

Printer driver
A software program that will convert the application program's printing request into the language that the printer understands.

Print head element
The thermal print head consists of a single line of tiny resistive elements and when current is allowed to flow through each element it heats up causing a small dot to be burned onto thermal paper or a small dot of ink to be transferred from a thermal ribbon to ordinary paper.

Pre-printed media
A type of media on which characters, logos, and other designs have been already printed.

Print speed
The speed at which printing occurs. This speed is expressed in units of ips (inches per second).

Reflective sensor
See Black mark sensor.

Resolution
The degree of detail to which an image can be duplicated. The minimum unit of divided image is called a pixel. As the resolution becomes higher, the number of pixels increased, resulting in more detailed image

Ribbon
An inked film used to transfer an image onto the media. In the thermal transfer printing, it is heated by the thermal print head, causing an image to be transferred onto the media

Supply
Media and ribbon

Supply holder
This unit holds a media roll at the rear of the printer so that the media is fed toward the print head.

Tag
A type of media having no adhesive backing but black marks to indicate the print area. Usually tags are made of cardboard or other durable material.

Tear off mode
Printer mode of operation where no cutter module is installed and the operation must manually tear off the printed media by forcing the media downward against a tear bar.

Thermal direct printing
A printing method using no ribbon, but thermal media which reacts to heat. The thermal print head heats the thermal media directly, causing print image to be printed on the media.

Thermal print head
A print head using thermal transfer or thermal direct printing method.

Thermal transfer printing
A printing method that the thermal print head heats an ink or resin coating on the ribbon against the media, causing the ink/resin to transfer onto the media.

Threshold setting
A sensor setting operation to have the printer maintain a constant print position of pre-printed media.

Transmissive sensor
See Feed gap sensor.

X Axis
In the printer, it is the horizontal position (left and right) of the print on the label. This position may be adjusted by command from the host computer, or by a parameter change on the printer.

INDEX

B
Backing paper A1-3
Bar code A1-1
Batch mode 3-2
Black mark A1-2
Black mark length A1-3
Black mark sensor 1-4, 2-12 ,5-1

C
Centronics 1-3, 2-2
Cut mode 3-2
Cutter module 5-2, A1-2

D
Dimensions 1-3
Dithering 3-21

E
Effective print width A1-3
ERROR LED 1-4, 4-1
Error message 6-1
Expansion I/O interface 1-3, 2-4
Expansion I/O interface board A1-2

F
Feed gap sensor 1-4, 2-12, 5-1
FEED key 1-4, 4-1
Flash memory card 2-14

G
Gap between labels A1-3
Gap length A1-3
Guaranteed print area A1-4

H
Head block release lever 1-4, 2-10
Head pressure adjust lever 1-3, 2-11

I
Intensity 3-21
Interface A1-1
Issue mode A1-1

J
Jammed media 6-3

K
KB-80-QM keyboard 2-4
Keyboard interface 1-3
Keyboard module A1-2

L
Label A1-2
Label length A1-3
LCD message display 1-3, 1-4, 4-1, A1-1

M
Maintenance counter A4-2, A4-28
Media 2-7, 5-2, A1-2
Media pitch A1-3

O
ONLINE LED 1-4, 4-1
Operation Panel 1-3, 4-1

P
Paper guide 1-4, 2-10
Parallel interface 1-3
Parallel port 2-4
PAUSE key 1-4, 4-1
PCL emulation A4-2, A4-20, A4-22, A4-31
PCL5 interface 1-3, 2-4
PCL5 interface board A1-2
PCMCIA card 2-14
PCMCIA interface board 2-14, A1-2
Platen 1-4, 5-1
Power consumption A1-1
Power cord 1-2, 2-5
POWER LED 1-4, 4-1
Power switch 1-3, 2-5, 2-6
Pre-printed media 5-2
Printer parameter A4-2, A4-5, A4-28
Print head 1-4, 5-1
Print head block 1-4, 5-1
Print head cleaner 1-2, 5-1
Print length A1-3
Printing method A1-1
Printing speed A1-1

R

Reflective sensor A1-4
Resolution A1-1
RESTART key 1-4, 4-1
Ribbon 2-13, 5-2, A1-5
Ribbon holder 1-4
Ribbon supply roll 2-13
Ribbon take up roll 2-13
Ribbon width A1-5
Rotation A1-1
RS-232C 1-3, 2-2, 2-4, A3-1

S

Self diagnostic test A4-2, A4-3, A4-4, A4-24
Sensor 2-12, 5-1
Sensor adjust gear 2-12
Serial interface 1-3
Supply Holder Frame 2-3, 2-9
Supply Holder Locking Knob 2-7, 2-8
Supply Holder Unit 1-2, 1-3, 2-7
Supply voltage A1-1

T

Tag A1-2
Tear off mode 3-1
Test print 2-15, A4-2, A4-13
Thermal direct A1-1
Thermal transfer A1-1
Threshold setting 6-4
Transmissive sensor A1-3
Two dimensional code A1-1

W

Weight A1-1

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